

# American Aviation

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## Munitions Board Rejects Nelson's Plea to Grant Aircraft Top Priority Rating



### Grim Lessons

OUT OF the many enlightening dispatches from a United Press correspondent named Harold Guard stationed at Singapore, two quotations struck us as particularly significant.

A few days before the Japs actually landed men on the island of Singapore, Guard quoted a veteran pilot of the Battle of Britain as saying: "Why, Singapore is more closely manned than the most dangerous points on the British coast. All we want is more and more planes."

More planes! More planes of the quantity and quality that Assistant Secretary of War for Air Robert Lovett and Lt. Gen. H. H. 'Hap' Arnold have been battling for! And yet with all of the setting of goals by the President of the United States, there is a bottleneck in priorities which is seriously hampering our entire airplane production program at a time when every first-line combat plane counts.

As readers will learn from a lead article in this issue of AMERICAN AVIATION, materials for four-engine bombers have

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### Brass-Hat Astigmatism



This London Cartoon Is Also Timely Here

Can Donald Nelson Improve Washington Vision?

### Battleships Still Have First Call On Materials

By WAYNE W. PARRISH

AN OBSOLETE and inequitable priority system which rates the bulk of our combat aircraft far behind battleships and tanks threatens the entire aircraft production program for 1942.

Despite the President's directive calling for 60,000 combat airplanes this year and 125,000 planes next year, the Army and Navy Munitions Board, which has controlled the priority system, has again refused to grant combat airplanes an A-1-a priority for materials.

With four-engine bombers operating only on an A-1-b priority, and all other types of combat airplanes with an A-1-d rating, aircraft production is expected to fall off within six months unless the outmoded priority system is remedied in the very near future.

At a time when the press, the President, and the United Nations are placing the greatest stress on the immediate need for combat airplanes, the American people would be given a jolt far worse than Pearl Harbor if they knew the manner in which material to go into airplanes has been side-

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# CAP Facing Tests to Win Military Role

Some Military Leaders Still Skeptical Over  
Extensive Use of Civilian Pilots  
for Defense Missions

By JAMES L. STRAIGHT  
West Coast Editor

UPON THE RESULTS of experimental projects being carried out by Civil Air Patrol units in Florida, Tennessee, and Ohio as this is written will largely depend the nature and extent of future CAP operations throughout the nation. The question of whether, and under what conditions, the civilian flying volunteers can discharge actual military missions is on trial now.

The stony-faced judges with their oak leaves and eagles will either be favorably impressed with the flexible utility of the immense reservoir of equipment and experienced personnel that CAP is offering them; or they will conclude that they have better ways of meeting their domestic patrol, liaison and reconnaissance needs.

With the latter verdict, the military leaders would have to reconcile themselves to using for this light work fleets of heavy and expensive military aircraft, manned out of the critical supply of Air Forces pilots. It would mean, say CAP enthusiasts, an unnecessary sterilizing of combat personnel and equipment in work that can be done as well or better by lightplanes.

All of the documentary evidence in the case is already on exhibit. There remains only the results of trials in actual service.

Also in the defendants' box is the palsied shadow of private aviation, especially in the 150-mile grounded strip extending from Mexico to Canada along the Pacific Coast. For unless CAP actually fits into the wartime scheme of things, then not only will the nation sacrifice the possible military usefulness of several thousand privately owned aircraft in this strip, but will ground for the duration twice that number of experienced fliers who are not eligible for military service.

## Threat to Airports

At the same time there will be grave danger that many dozens of outlying civilian airports, deprived of any economic reason for maintenance, will return to farming or residential uses, perhaps lost forever to civil aviation.

Since topography is the prime determinant in airport location, it follows that once these airports are so converted the loss will be irreplaceable.

So serious would the loss of these outlying airports be that private flying leaders are already urging west coast civil aeronautics officials to foster some means of guaranteeing their maintenance, even if it involves some financial aid such as automobile dealers, under new car rationing, are getting for their storage space.

The first weapon for "winning the peace after we win the war," they point out, will be civil aeronautics, which would be hamstrung without ground facilities.

Still more important and urgent, however, is the universally recognized value of maintaining a multitude of scattered dispersion fields, as the most effective precaution against ground damage to military aircraft by bombing and strafing.

Meanwhile, it is generally felt that if the CAP guinea pigs on the Eastern seaboard, and in Ohio and Tennessee perform favorably in the eyes of Army observers, there is still another hurdle for CAP. That is the delicate question of their relationship with the armed forces: whether confident reliance will readily be placed upon them for the discharge of vital duties; whether they can "click" with the powers directing this complicated business of war.

## Stalemate Possible

Without unqualified amicability, without War and Navy Depts. appreciation that CAP rolls are made up of carefully investigated volunteers who are asking nothing except the opportunity to serve at any sac-



**Training Tour:** On initial contact tour to familiarize wing command staffs with CAP training procedure, Capt. Harry H. Blee (left), head of CAP training division, is pictured at Birmingham airport with Capt. George W. Noland, Air Corps, commander of Region 4, and Harold F. Wood of Birmingham, Alabama wing commander.



West Coast CPTP Plane in Wartime  
Military Markings Required After Pearl Harbor\*

Photo by Bowers

rice, with no draft deferment involved and in most cases actual bars against enlistment, CAP may yet stalemate, and with it die the last hope for continued large scale civilian flying.

Already Air Corps officers have been quoted as asking: "If they want to fly, why don't they join the Air Corps?"

The answer to that question, according to California State Wing Commander Bertrand Rhine, is quickly found in the data on 600 CAP memberships so far approved in Washington for his area, with large numbers still in the hopper.

## Ineligible for Army

Virtually all of them are over Air Corps age requirements, many are married with family responsibilities, some are physically ineligible, many are already filling highly essential defense positions in industry and air transport, and a substantial proportion are women, of whom many have been active, certificated flying instructors until the grounding order.

Hundreds of these people have impressive totals of flying hours in all types of equipment, and bring to their volunteer duties an unequalled knowledge of the terrain over which they will operate.

Will these considerations, one observer asks, be sufficient to overbalance the first inclination of the military to resent being placed in a position where a vitally important mission is expected to be accomplished with civilian personnel and equipment?

In wartime there is a logical insistence that all action be correlated under established military procedure, with every component in uniform and subject to the rigid discipline and protocol of rank, with unquestioning execution of orders.

"We will meet those conditions and more," say CAP members. "We are ready now for any kind of patrol or reconnaissance mission subject to orders from the Army, Navy, Marine Corps, state or local defense councils, always under exact instructions and strictest supervision. Moreover, we are not drawing a line at any kind of ground duty for which our experience fits

## CAP Progress

CAP headquarters in Washington reports that 16,516 applications for membership had been received as of Jan. 28, with the enlistments coming in at the rate of approximately 850 daily.

However, it is pointed out that estimates received from wings where membership drives are underway place the number of applicants at higher figures, since some delay is occasioned by the checking of applications by Wing Commanders.

Present emphasis is on enrolling pilots first, and ground personnel later. Immediate CAP aim is enlistment of at least 90,000 civilian fliers.

The 16,516 applications received in Washington as of Jan. 28 are broken down by states in the following table which also shows the percentage of applications to total number of certificated pilots in each state.

	No.	%
Alabama	244	26.1
Arizona	128	22.2
Arkansas	182	17.6
California	828	9.2
Colorado	155	11.8
Connecticut	318	45.8
Delaware	127	88.8
Florida	392	18.8
Georgia	112	9.7
Idaho	153	22.7
Illinois	953	25.2
Indiana	578	32.8
Iowa	399	24.1
Kansas	263	14.7
Kentucky	226	48.1
Louisiana	320	25.3
Maine	226	88.8
Maryland	258	26.0
Massachusetts	382	15.1
Michigan	1,101	36.0
Minnesota	137	8.1
Mississippi	48	6.8
Missouri	489	18.6
Montana	273	38.7
Nebraska	196	17.9
Nevada	70	31.3
New Hampshire	201	88.8
New Jersey	468	22.9
New Mexico	149	29.4
New York	1,366	23.8
North Carolina	246	27.5
North Dakota	72	12.3
Ohio	1,148	32.1
Oklahoma	243	11.9
Oregon	369	29.1
Pennsylvania	1,082	26.7
Rhode Island	74	23.1
South Carolina	226	26.9
South Dakota	126	23.8
Tennessee	297	20.2
Texas	863	10.0
Vermont	137	18.8
Virginia	48	20.1
Washington	122	10.8
West Virginia	243	18.6
Wisconsin	203	23.1
Wyoming	337	28.8
District of Columbia	71	15.4
Canal Zone	1	...
Total	16,516	...

\* During the first week after the Pearl Harbor surprise, West Coast CPTP planes were allowed to take to the air only when marked as the Piper Cub shown above; with regular military star-in-rectangle insignia on each wing, opposite the license, and a large "US" on the fuselage. Shortly thereafter, however, CPTP flying was grounded on the West Coast and forced inland.

(Turn to page 41)

# Congress Okays 18 Billions in Air Funds

A 26 billion dollar Naval appropriation bill brought aviation allocations voted within the past two weeks to a total of \$18,350,153,944. The bill provides \$5,844,281,470 for the Bureau of Aeronautics. The previously passed Army appropriation of \$12,525,872,474 was entirely for the nation's air arm.

A few days after passing the Army aviation bill, the House voted a 17½ billion dollar Naval appropriation which in 6 days was raised in the Senate by over 6 billion dollars (cash)—of which over 5 billion is for airplanes and accessories.

Hearings on this "sudden increase" requested by the Navy Department were held by the Senate sub-committee on aviation headed by Sen. Overton (D., La.) who stated that "it was for equipment on which estimates had not been completely compiled when the bill passed in the House, and was due almost entirely to the Pearl Harbor incident."

The 17½ billion dollar Naval appropriation first voted by the House allocated only a total of \$1,668,281,470 (for both 1942 and 1943 fiscal years) to the Bureau of Aeronautics; the 26½ billion dollar appropriation finally approved by both bodies allocated \$5,844,281,470, or 25% of the total appropriation. This is exclusive of "ordnance" items for the aircraft.

## 18,000 Plane Goal

The productive rate goal of the Navy Bureau of Aeronautics is 18,000 planes for 1942 and 21,000 planes for 1943, as called for in the President's program for a total of 60,000 planes for 1942 and 125,000 for 1943.

Rear Admiral J. H. Towers, Chief of the bureau, stated that the \$4,176,000,000 additional 1942 supplement for aircraft exclusively will accomplish the 18,000 goal for planes in several different categories: fighting, scouting, bombing, torpedo, patrol, and a limited number of training planes and transports.

The bureau intends to procure by Dec. 31, 1943 with its present appropriations a total of 23,354 additional airplanes, consisting of 19,830 program planes, 3,513 other planes and additional equipment, and 11 planes for the Coast Guard, according to Sen. Overton, as quoted in the Congressional Record.

The average cost of Naval aircraft, running from the smaller craft all the way up to bombers at present is about \$270,000. Admiral Towers anticipates that this cost will fluctuate, rather than steadily decrease with mass production.

Engines are said to be the only bottleneck problem in the Bureau's aircraft program. Secretary Knox

## Army to Order 33,000 Planes

With a new \$12,525,872,474 appropriation (1942 supplements to remain available through the 1943 fiscal year), the Army intends to procure a total of 33,000 airplanes, 23,000 tactical types and 10,000 training types.

The object of the program is to continue present production levels of aircraft until June 30, 1942, for training airplanes; through Dec. 31, 1943, for tactical planes (except heavy bombers); through June 30, 1944, for heavy bombers; and to increase the level of production of heavy bombers to 1,000 per month after June 30, 1944.

This program, except in the case of heavy bombers, does not take into consideration a 7-day-week and 24-hour-day speed-up in industry.

told a committee: "We are apparently getting the capacity for the bodies of the planes faster than we can get the engines with which to equip them, and we have got to expand tremendously our engine production in order to keep up with this enlarged program."

Rear Admiral W. H. P. Blandy, Chief of the Bureau of Ordnance, requested \$896,304,000 (in the 6 billion dollar 1942 supplemental appropriation) for aviation ordnance for new aircraft.

Following is a breakdown of the total Naval Appropriations bill, as approved after joint conference:

Title I, Regular Annual Appropriation, 1943 (cash)	\$14,045,339,974
Title II, Supplements for 1942 (cash)	6,693,525,500
Total Cash Authorizations	\$20,738,865,474
Contract Authorizations	\$4,670,000,000
Partial Liquidation of Contract Authorizations in 1943	1,913,600,000
Total Contract Authorizations to be met by Future Cash Appropriations	\$2,756,400,000
TOTAL CASH AND CONTRACT AUTHORIZATIONS	\$26,495,265,474

Following is a breakdown of the 6 billion dollar increase, requested by the Navy Department after the 17½ billion dollar Naval appropriation bill had passed the House:

Ship Maintenance	\$944,000,000
Airplanes	4,176,000,000
Ordnance Stores for Above	896,300,000
Total	\$6,016,300,000

In the table immediately above, \$5,401,300,000 is in 1942 supplements, including both aviation items, as well as \$329,000,000 of the ship maintenance appropriation. The remainder of the ship maintenance appropriation is for 1943.

The appropriation bill, as finally approved, allocated \$5,844,281,470 to the Bureau of Aeronautics (exclusive of armament, ammunition and ordnance for planes) which includes the \$1,668,281,470 contained in the original bill passed by the House, plus the additional \$4,176,000,000 requested at Senate hearings on the bill:

Bureau of Aeronautics:	
1943 Appropriation (as in House Bill)	\$1,435,981,470
1942 Supplemental Appropriation (as in House Bill)	232,300,000
1942 Supplemental (approved by Senate)	4,176,000,000
Total	\$5,844,281,470

The total, \$5,844,281,470, provides for 25,063 aircraft, and represents the 23,354 airplanes provided for in the Senate addition plus the 1,709 carried in the bill as it passed the House.

The aviation total in 1942 supplements, exclusive of aviation ordnance, is \$4,408,300,000 of which \$232,300,000 was carried in the bill as it passed the House. This provides for

23,354 airplanes, 21 nonrigid craft, and plant expansions not to exceed \$95,000,000.

The aviation total for the 1943 fiscal year is \$1,435,981,470 of which \$740,000,000 is for liquidation of prior contract authorizations.

## Aircraft Facility Plant

Rep. Sabath's resolution asking \$100,000,000 to establish a "Federal Aircraft Facility" near Chicago, which, in the language of its sponsors, would continue vital defense

research and furnish the government a "yardstick" to determine aircraft manufacturing costs, has lined up with a new movement in the House led by Rep. Beiter (D., N. Y.) for a unified air force, with Maj. Alexander P. deSeversky, Col. Roscoe Turner and Maj. Al Williams buttressing both measures.

Little chance of success is seen for the bills.

## Profiteering Bills

Rep. Vinson (D., Ga.) has introduced two bills, still pending in committee rooms, intended to check alleged war profiteering.

Bill HR 6444 requires all labor, trade, and business organizations to register with the Secretary of Commerce. In introducing this legislation, Vinson said he was acting on the Naval Committee's findings that both industry and labor were "enriching themselves" at the expense of the nation's war effort.

Recognizing the right of both employers and employees to organize, the bill claims to be a measure to safeguard the right of the individual and the public "against the abuse of these rights of self-organization, to regulate and promote trade and commerce among the several States." The registration statement to be filed with the Secretary of Commerce would require data on officials and financial information.

The other bill, HR 6514, provides

for the inspection at all times of records and other writings of Naval contractors in cases of contracts of \$1,000,000 and over.

## Tydings Legislation

To counteract current complaints concerning "unwarranted" profits on defense orders, Sen. Tydings (D., Md.) second ranking member of the Senate Naval Affairs Committee, has stated that he expects shortly to formulate legislation which would require periodic reports from the Treasury Department on net earnings of contractors which would give a "true" picture of the profiteering situation. The reports would show firm profits after taxes.

Tydings remarked that "after March tax receipts are filed it will be surprising to find out the low rate of profit on defense contracts, even by such concerns as General Motors, which seemingly are making millions of dollars off of the government; and, with the additional taxes which are bound to come, the rate of profit will be even lower."

## Truman Funds

The Senate has voted an additional \$60,000 to enable Sen. Truman's Committee to continue its investigation of the war program. Truman (D., Mo.) who received \$40,000 last year had requested an additional \$100,000.

## Speed-Up Law

The Senate Naval Affairs Committee is still considering an amendment bill already passed by the House, extending the time limit on the so-called "Speed-up Law" from June 1942 to June 1944. The Act permits negotiated contracts and grants the Navy certain powers for rapid development of its national defense program.

Sen. Truman (D., Mo.) has appeared in hearings before the Committee on two amendments contemplated by Chairman Walsh (D., Mass.): (1) a profit limitation clause; (2) a provision which would make a false statement regarding production costs by a Naval contractor punishable by loss of citizenship, fine and imprisonment.

The original Act (Public-No. 671-76th Cong.) had an 8% profit limitation clause which was later nullified.

## War Damage Bill

The House Banking Committee has reported out the Senate War Damage Corp. bill with an amendment eliminating free government insurance on property damage due to enemy attack. As the bill passed the Senate, free coverage would be given up to \$15,000.

This bill extends the borrowing powers of the RFC by \$3,500,000,000 of which \$1,000,000,000 is to finance the War Damage Corp. created by the bill.





# The Birdmen's Perch

We hope the snake story below doesn't scare any of the gals away. It tickles us when they send in taller tales than some of you male saga spinners. If it keeps up we may have to run a "Beauty Hints" column for them! Let's have some more, ladies.

Major Al Williams, alias "Tattered Wing Tips,"  
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh, Pa.

## THE FUNNYBONER DEPT.

Dear Major,

I suppose there must be a hundred versions of this story but I like my husband's best:



After years of wheel jobs we bought a pontoon-equipped ship. My husband had had only twenty minutes in the seaplane when we headed north on our annual hunting trip. After an uneventful few hours, we spotted our lodge and the landing strip which we'd built ourselves. My husband automatically dragged the field and swung around for an approach. We had less than thirty feet under us when I remembered the pontoons! "Stu!" I shrieked.

Somehow he sensed what I meant because he jammed the throttle open and got upstairs fast. Without another word between us, he headed for the lake, brought us down smoothly, and taxied up to our swimming float. We both sat there for a minute or two limp and damp. Finally he reached for his seat belt with shaking hands, undid it, and opened the door.

"Honest, I don't know how I could have done such a blankety-blank dumb, bonehead thing," he snarled as he stepped out into 16 feet of water!

Mrs. W. B. Stuart-Bullock  
New York City

## THIS MONTH'S BRAIN TWISTER

A railroad 350 miles long is built in a huge semi-circle. Two trains, one doing 30 m.p.h. and the other 40 m.p.h., start toward each other from opposite ends of the track. At the same time, a plane begins to fly back and forth between the trains at 100



m.p.h. (The pilot's a hot-shot and does his turns in nothing flat.) How far will the plane have flown by the time the trains meet? Robert Smith, who sent this one in from up in Hamilton, Ont., says it's as easy as pi.

## STORY WITH A TWIST

Some of you Westerners are probably familiar with the hog-nosed snake. When he's frightened he blows himself up to twice his normal size. If that fails to scare away any enemies, why he plays dead. Just being dead isn't enough, though; he must be on his back to feel properly dead. And if you put him right side up he'll come to life long enough to roll over on his back again before resuming his "death." He's a perfectionist!

But when it comes to perfectionists, I'll take these fellows down here who make Gulfpride Oil any time! First of all



they demand choice crudes. Then they refine these crudes by a special method they developed because ordinary refining methods weren't perfect enough for them. This method (it's called Alchlor Process) gets more of the harmful carbon formers and sludge makers out of the oil. The result of this perfectionism is Gulfpride and you pilots who use it know how it adds to the efficiency of your power plants. If you haven't used it, try it and see how Gulfpride helps you get the last ounce of performance from your engine.

## THIS MONTH'S WHOPPER

Dear Major,

I stopped by the airport a few days back and saw an old guy with a Model T trying to



get his jalopy started. Turned out he didn't have any gas. Fortunately everyone on the field was watching a "Stratoliner" take off, so I slipped into a hangar and drained a carburetor I found on an inspection table.

Well, I put the Gulf Aviation Gas (of course it was G.A.G.! That's the only kind we use on this field!) in the "T" and cranked her for the old guy. I guess the throttle must have stuck wide open because that Model T dug out so fast that the sudden shock of air against the windshield broke the glass. The engine wound up tight and before she'd gone 100 feet she started to climb right up into the air! You see, there were two new tires on the jalopy and the treads gave her a grip on the air. (This is now a military secret, as you probably know.)

Major, that engine was turning over so fast that it just naturally kept winding, even after the G.A.G. was used up. The old guy had to just sit tight and wait for the friction of the air to wear the treads off those new tires.

Finally that happened and when he touched the ground he was right smack in front of the Administration Building at La Guardia Field! But by that time the treads, tires, and rims had been worn from his wheels. Before he could brake that "T," he'd over-shot the field and plowed clean through Jamaica Bay with the spokes acting as waterwheels. (He sold the "T" to the Marines last week for a swamp-buggy and now it's a military secret!)

Furthermore, he beat the "Stratoliner" in by 15 minutes!

Truly yours,  
Ray "Cotton" Kottenbach, Hollywood, Calif.

Gulf Oil Corporation and Gulf Refining Company . . . makers of



**GULF AVIATION PRODUCTS**

# Harter Committee Lauds Plane Industry

## Members of House Military Group Issue 1st Report

By ROBERT H. WOOD

AMERICAN aircraft and the men who build them win highest praise from a special subcommittee of the powerful House Military Affairs Committee which made its first report on the state of the Army's aviation war program Feb. 2.

The group of six Congressmen, headed by Rep. Dow Harter (D., Ohio), find after months of first-hand investigation that our four-engined bombers are the world's best, and that our other combat craft are "equal in most types" to the output of other nations.

This language is in contrast to that of the critical Truman Committee which asserted that only a limited amount of our present production is "equal or superior to the best types produced abroad."

### Problem Ignored

"The best information available to the special committee indicates the production schedules, tough as they are for this year and next, will be met and fulfilled," the report states, but little attention is given anywhere to the vital problem of materials supply for the 60,000 planes called for by the President for 1942. Instead, the six men have selected for their next subjects matters like personnel problems faced by the Army Air Forces, air base construction, flyers' housing needs, performance of American aircraft on the battle fronts, and the ever-popular theme of manufacturers' profits.

Authorized by the same bill which gave the green light to a similar inquiry into the Navy's defense program by the House Naval Affairs Committee under Rep. Vinson (D. Ga.), the Harter study was submitted to the full Military committee, which eventually will make a more comprehensive analysis for the House itself. While Vinson's full committee has made two reports, the Military Affairs plan appears to encompass a series of studies by subcommittees.

"All in all, this special committee finds the aircraft manufacturers have been made up of forward looking business men who have had tremendous problems confronting them during the last several years and who have surmounted most obstacles and are performing a most important and patriotic service to their country.

"Some mistakes have been made,



A Bomb-Carrying Hurricane in Libyan Offensive

But It Is Unsuitable for Desert Combat, Harter Claims

which is only natural, but the industry, when requested to do a job, has proceeded to perform it in the most approved American fashion," the report states.

### Conclusions

Other conclusions reached were: When our latest pursuit, the Republic P-47, enters full production "we doubtless will have the edge for the time being in ceiling and performance of all fighters in the world."

The Air Corps overlooked "many opportunities to have much more efficient and modern planes prior to outbreak of war in 1939," although it finally did realize the necessity of modernization.

Quality may be more important than quantity in aircraft. "It was the quality of British aircraft . . . that turned back the German air blitz of September 1940. Nevertheless, there must be some freezing of

design in order to get adequate protection. If we insist on waiting for the ultimate plane, we shall have nothing to fight with."

It has been said that England, by stabilizing on one or two types of pursuit planes, is well ahead of us. "This is not so; she produces as many Army types as we do." Moreover, Spitfires and Hurricanes were unsuited to desert operation and American craft have dominated all air action in the middle east.

An all-purpose pursuit plane does not exist. Individual requirements of the theater of action must be taken into consideration.

"One of these days necessity and experimentation may produce the long-sought long-range pursuit plane. It is a consolation that no other nation has a satisfactory development of this type."

### Research Vital

The drawing boards are as much a battle front as any geographical theater. Facilities for research are being expanded.

Great strides have been made and the American people will have an ever-increasing flow of finished planes as we move through 1942.

"Those charged with procurement of military aircraft, engines and aeronautical equipment have been somewhat tardily alert to changing conditions and the necessity of keeping our equipment up to date."

Elsewhere in the report the investigators set forth their belief that recent reorganizations of the Air Forces have made the corps "virtually autonomous," thus indirectly answering proponents of a "separate air force." They believe the 84-group program will be "doubled or tripled" before war's end.

Training of personnel has made "tremendous progress."

The network of domestic and outlying airbases nears completion, with landing and takeoff facilities

available at all points except the Hard-surfaced runways are recommended over other types, camouflage and underground construction are strongly urged.

"It is the judgment of your special committee that raids on strategic areas by an enemy force will be most difficult, if not impossible," when the giant bases are completed at Newfoundland, Bermuda, Puerto Rico, and in the Caribbean.

### Praises P-47

The committee describes the Republic P-47 as "the most suitable aircraft of its type in the world." In the high altitude class, the Lockheed P-38 "leads both the Hurricane and the Spitfire." The new Curtiss P-40F, with its operation at 22,000-ft., "is rated above the so-called medium fighter," and has "great striking power," while the P-40D and P-40E "have been found superior to the Spitfire and Hurricane...under controlled flight test conditions...at 15,000-ft. or below."

In the medium bomber field both the North American B-25 and the Martin B-26 "are superior to any foreign medium bomber. . . . The B-26 has a slightly higher top speed and somewhat more range, and its high cruising speed makes it the fastest bomber of its class in the world."

Among the light bombers, the Douglas A-24 dive bomber and the Douglas A-20 attack bomber also "are superior to any enemy planes in their class."

"We have first hand proof that our efforts in the field of pursuit development are bearing excellent fruit," with the Bell P-39, the P-40, Lockheed P-38, and the P-47. The P-39 "is being produced at a very satisfactory rate," and the P-39 (Airacobra) is demonstrating itself as superior to the Spitfire and Messerschmitt in the medium altitude field.

## Aviation Has 'Biggest War Job,' Ward States

ALTHOUGH offering no opinion as to whether the aircraft industry in view of an impending material shortage would be able to fulfill President Roosevelt's request for 185,000 warplanes by the end of 1943, J. Carlton Ward Jr., president of Fairchild Engine & Airplane Corp., in a recent New York speech declared that Americans could "take pride" in the industry's response to "the biggest war job in the world."

Ward pointed out that aeronautical products are accounting for 17% of U. S. total war expenditures. If the U. S. between 1933 and 1939 had applied to war production the \$39,000,000,000 spent by Germany "we would have been so far ahead of Hitler that the war would be over by now," he stated.



Urges United Air Force  
NY News Continues Campaign



WRIGHT WILL POWER THE TONNAGE OF THE AIR



In their respective fields, a fine watch and a Cyclone engine represent the utmost in skill, ingenuity, and accuracy. But while the watch merely ticks away fleeting time, its powerful counterpart is saving hours which would otherwise be lost forever. Watches long ago reached their maximum of utility, but today Wright is preparing even greater time-saving engines to haul the huge air cargos of tomorrow.

**WRIGHT** *Aircraft Engines*



*Edo floats fabricated with Boots Self-Locking Nuts*

## How Edo Cuts Weight and Licks a Salt-water Problem

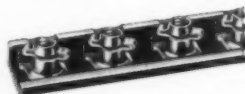
Smooth water as a landing surface produces as much shock at 60 m.p.h. as concrete. A choppy sea multiplies the shock into extraordinary stress and strain on all pontoon designs.

Edo Engineers, seeking greater strength and savings in weight, specify the dependable Boots Self-Locking Nut, an ingenious device which cannot be loosened by vibration. It be-

comes a *permanent*, integral part of the float.

Boots Self-Locking Nuts also help solve the problem of salt-water corrosion. Being all-metal, they halt the damaging effect of salt atmosphere.

*Boots are the only one-piece, all-metal self-locking nuts to pass the rigid tests of Army, Navy, and the Civil Aeronautics Authority.*



*Boots Channel Nuts "Outlast the Plane"*

# BOOTS

**AIRCRAFT NUT CORPORATION**

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# New Navy Program Will Turn Out Pilots at Rate of 30,000 Yearly

By LEONARD EISERER

**T**HE MOST extensive aviation training program in naval history, designed to turn out Navy and Marine Corps combat pilots at the rate of 30,000 a year was announced by Navy Secretary Frank Knox, Feb. 1.

Principal features of the vastly enlarged naval aviation training effort as outlined by Navy officials indicate:

- The Navy and Marine Corps will induct more than 2,500 cadets monthly, meaning a 300% increase in the present induction rate of pilot candidates.
- Facilities at four large universities in the East, South, Middle West, and Far West are being leased by the Navy for duration of the war, each to become an "Annapolis of the Air."
- A three-month preliminary "toughening" process for candidates will be the most strenuous in the history of American military training.
- Prominent sports figures, educators, psychologists, pilots with actual battle experience will be named for faculty and advisory boards.
- The stepped-up training program will guarantee an adequate supply of trained combat airmen as fast as planes become available under the victory plane program inaugurated by President Roosevelt last Jan. 5.

The expanded naval aviation training system, scheduled to be in operation before May 1, is intended to condition pilots for any hardship they may have to face in, or as a result of, actual air combat. Preparatory to fighting in many different combat areas the world over, the Navy's new pilots will be taught to become expert swimmers and life savers, to take care of themselves in a jungle, in a blizzard, and in barren desert lands, in whatever spot the vagaries of war may place them.

## Best Pilots in World

As described by Secretary Knox, "the Navy's new aviation program is a distinct challenge to patriotic young men who are proud of their ability to take it. This training will be hard, but the time for pulling punches in words or actions has passed. The men who take this training will have to have guts. When they have won their Navy wings, they will have proved that they can take it and hand it out. That's the kind of fighting pilots the Navy wants and the country needs. "This training and the air training which follows it will make these men the best pilots in the world. They will benefit from it for the

rest of their lives. They will be the leaders in post-war aviation development. They will take the air in steadily increasing numbers, and do much to win this war for this country."

Basic elements of the new plan were worked out before the Pearl Harbor stimulus, under the direction of Artemus L. Gates, Assistant Secretary of the Navy for Air, and Adm. John H. Towers, chief of the Bureau of Aeronautics, but the "toughening" process was considered too strenuous for adoption during peacetime on a voluntary basis.

## Effective Leadership

Lt. Comdr. Tom Hamilton, former head football coach at the Naval Academy and himself a top Naval flier, has been named to direct the aviation physical training. Lt. Comdr. James J. Tunney, physical training director for all naval personnel, will assist as adviser in the program. Leading college athletic coaches and sports figures will be inducted into the Naval Reserve to provide effective leadership for the physical phases of the pilot training program.

Illustrating the emphasis to be given physical condition of the new Navy pilots, officials explain that the trainees will learn to march up to 40 miles from sunup to sundown, will be set at such un-aeronautical heavy labor as ditch-digging, wood-chopping and land-clearing, and will be extensively schooled in such realistic self-defense arts as boxing, advanced jujitsu, and rough-and-tumble fighting.

## Ground Schools

The four universities to be used in the four quadrants of the country will serve solely as ground schools, each comparable in size to the Naval Academy at Annapolis. At this writing, arrangements with these schools are reported progressing satisfactorily with the names due to be disclosed shortly. Effort is being made to select institutions which will be the least affected by a dislocation of present activities and which have the necessary athletic facilities.

Naval pilot candidates will spend the first three months of their training at one of these schools, where the hardening program will begin.

This preliminary training will consist of four basic fundamentals to prepare the student for actual flight instruction: proper physical conditioning; indoctrination in naval history and customs; military drill and seamanship; and training in communications, ordnance and related specialties.

After passing rigorous physical and mental examinations, the in-

ducted cadet will begin his day at 6 A.M. with 15 minutes of stiff "tone up" exercises held outdoors, regardless of weather. During the succeeding 15 hours the trainee will alternate between classrooms, drill, sports, and muscle-building manual labor. Except for meal and study periods, the cadet will have only 30 minutes for rest during his 16-hour day.

The pilots-to-be will be granted no leave during the initial three-month conditioning period, but it is intended to teach the cadets to play as hard at sports as they will be taught to work and fight.

Those successfully completing the preliminary course at one of the four schools will be passed on to one of the 16 Naval Reserve aviation bases for actual primary flight training. Then they will go, as usual, to one of the Navy's advanced flying schools. The entire flight training course will take a year, with less time required in special cases.

## Mexican Flight Ban

Mexico has prohibited foreign planes from flying over Mexican territory, specifically exempting from the order, however, U. S. military planes which are permitted to land for servicing under terms of an existing agreement. Planes of regularly operated airlines are also exempt from the new regulation.

## Tests Are Completed on ST3-S, New Ryan Seaplane Trainer

THE ST3-S, a new seaplane trainer, differing from the Air Corps' latest Ryan PT-22 trainers only in the substitution of twin floats for the conventional landplane landing gear, has been developed by Ryan Aeronautical Co., San Diego, Cal.

Ryan officials did not disclose eventual destination of the new seaplane, indicating merely that tests had been completed by Joe Rust, company test pilot. The ST3-S is powered by a 160-hp. radial.



## A WAR MESSAGE to

## ALL EMPLOYERS

★ From the United States Treasury Department ★

WINNING THIS WAR is going to take the mightiest effort America has ever made—in men, materials, and money!

An important part of the billions of dollars required to produce the planes, tanks, ships, and guns our Army and Navy need must come from the sale of Defense Bonds. Only by regular pay-day by pay-day investment of the American people can this be done.

Facing these facts, your Government needs, urgently, your cooperation with your employees in immediately enrolling them in

### A PAY-ROLL SAVINGS PLAN

The voluntary Pay-Roll Savings Plan (approved by organized labor) provides for regular purchases by your employees of Defense Bonds through voluntary pay-roll allotments. All you do is hold the total funds authorized from pay-roll allotments in a separate account and deliver a Defense Bond to the employee

each time his allotments accumulate to an amount sufficient to purchase a Bond.

You are under no obligation, other than your own interest in the future of your country, to install the Plan after you and your employees have given it consideration.

### WHAT THE PAY-ROLL SAVINGS PLAN DOES

1. It provides immediate cash now to produce the finest, deadliest fighting equipment an Army and Navy ever needed to win. 2. It gives every American wage earner the opportunity for financial participation in National Defense. 3. By storing up wages, it will reduce the current demand for consumer goods while they are scarce, thus retarding inflation. 4. It reduces the percentage of Defense financing that must be placed with banks, thus putting our emergency financing on a sounder basis. 5. It builds a reserve buying power for the post-war purchase of civilian goods to keep our factories running after the war. 6. It helps your employees provide for their future.

Make Every Pay Day • BOND DAY

U. S. Defense BONDS ★ STAMPS



## Army-Navy News

# Air Corps Organizes New Command for Pilot Training

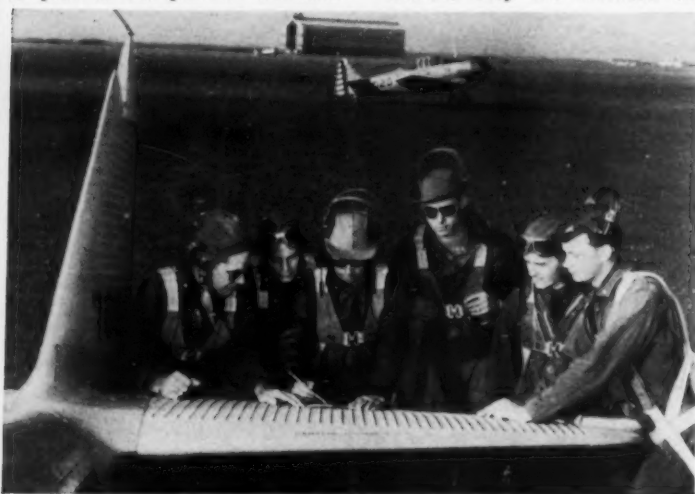
THE TASK of providing 30,000 new pilots needed to keep pace with the 1942 warplane production program has within the past fortnight been centralized by the Army Air Corps in a new Flying Training Command, headed by Maj. Gen. Barton K. Yount, one of the pioneers in the Air Corps training system and former commanding general of the West Coast Air Corps Training Center.

Described by War Dept. officials as part of the plan to eliminate

combat planes—for immediate and continuous use in training naval fighting forces for aircraft recognition and range estimation in gunnery work.

Plans and specifications are being prepared by the Bureau of Aeronautics for distribution through the U. S. Office of Education, which will administer the program in cooperation with all state departments of education and the local public and private schools.

Because they are intended for



Cadets Prepare for Interception Flying

Many Pilots, Navigators Needed by Air Corps

administrative bottlenecks by delegation of authority, the newly created command will bring all present Air Corps training centers under unified control and will extend its authority over any additional units that may be formed.

Although the Flying Training Command is thus charged with direction of the entire Air Corps flight training program, the Chief of the Air Corps will continue to be responsible for establishing new schools needed to keep the Air Forces supplied with combat crew.

With U. S. airplane production climbing to new heights month by month, the 1942 goal of 30,000 new pilots will be substantially raised next year. New facilities for training must be developed and all non-essentials relentlessly slashed so that the thousands of new Air Corps officers required may be sent to combat commands with all possible speed, the War Dept. stated.

Temporary headquarters for the Flying Training Command are in the Office of the Chief of the Air Corps, Washington, D. C.

## Wanted: Model Planes

Navy Secretary Knox has appealed to American high school youths to build 500,000 aircraft models—10,000 each of 50 types of

use in war training, the models must be built with scientific precision and accuracy, one inch on each model representing six feet on an actual plane, a scale of one to 72.

## Field Named for Hero

The new advanced flying school at Columbus, Miss., has been named Kaye Field in memory of Capt. Sam Kaye, flying hero of the last World War who died in 1939. Capt. Kaye shot down eight planes as a member of Capt. Eddie Rickenbacker's famous 94th Aero Squadron.

## Balloon Center Moved

The Army's only barrage balloon training center and school, started last April for aerial defense experiments, has been moved from its temporary location at Camp Davis, N. C., to its permanent station at Camp Tyson, Tenn. War Dept. is reported planning great expansion of this type of aerial defense.

There is good possibility that barrage balloons may be used for the defense of such places as New York harbor, Washington, Pittsburgh, the Panama Canal, overseas bases, power plants and industrial centers that might be the target of enemy dive and low level bombers.

## British Communique

# War Hits Civilians In Strange Places

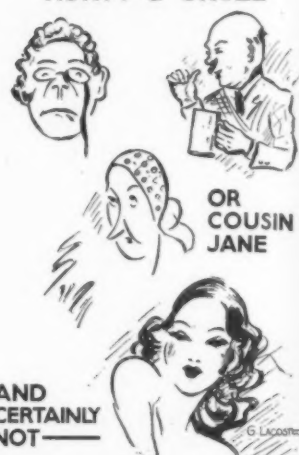
"YOU CANNOT frequent aerodromes for long without coming to the conclusion that flying enlarges the figure just as much as travel is said to broaden the mind," *Aeronautics*, British monthly, reports. "Senior transport pilots may even, in extreme cases, have to stagger their breathing when they sit side by side."

"The aeroplane appeared to break up in the air' may be only another way of saying that the captain and first officer took a deep breath simultaneously. Really hectic flying, on the other hand, is as thinning as any form of worry," the report observes.

"Intelligent medical officers will be watching this. If Flying Officer A loses weight, he may be due for a holiday, and if he puts it on, he is probably sickening for promotion; for responsibility, which can strain the spare frame and strung-up nerves beyond their safe limits, sits lightly on an easy corpulence."

"Which reminds us," *Aeronautics* says, "that a recently published photograph shows one of the life-saving dinghies which are being manufactured for the RAF by a corset factory. Here, indeed, is the supreme sacrifice. In order that some half-drowned pilot may but-

## DONT TELL AUNT & UNCLE



AND CERTAINLY NOT

New Air Force Poster

Prepared by Publicity Section

ton himself snugly into his dinghy combination, yet another selfless English-woman has let her figure go. To the end that Britannia, 1941, may rule the waves, she has had to let the contours get a trifle out of hand.

"It will take another Rubens to immortalise her."

## Army-Navy Personnel

Brig. Gen. Carl Spaatz, chief of the Army Air Staff, has been nominated for the rank of major general and assigned to head the Air Force Combat Command with headquarters at Bolling Field, D. C. He takes over the duties handled temporarily by Maj. Gen. Millard F. Harmon, following the transfer of Lt. Gen. Delos C. Emmons to head the Hawaiian Dept. last December.



Gen. Spaatz  
Combat Chief

Col. Davison  
Personnel Head

Gen. Harmon, former commanding general of the Second Air Force, with headquarters at Ft. George Wright, Wash., succeeds Gen. Spaatz as chief of the Air Staff.

New commanding general of the Second Air Force is Maj. Gen. Frederick L. Martin, who was relieved of command of the Hawaiian Air Force after the Pearl Harbor attack. The Roberts Commission report which charged Maj. Gen. Walter C. Short and Adm. Husband E. Kimmel with "dereliction of duty" did not mention Gen. Martin, who was then

subordinate to Gen. Short. In his present spot, Gen. Martin is responsible for aerial defense of the vital northwest sector of the U. S.

Col. F. Trubee Davison, Assistant Secretary of War for Air during the Coolidge administration, has been appointed assistant chief of Air Staff, A-1, in charge of military and civilian air forces personnel. Col. Davison, who was recalled to active duty last summer, has been serving as deputy chief of the Air Force Combat Command staff. He succeeds Brig. Gen. Ralph P. Cousins, recently ordered to command of the West Coast Air Corps Training Center.

The number of flying generals in command of land and air forces at posts outside continental U. S. was increased late last month when Maj. Gen. James E. Chaney, former head of the air defense command, was given control over all Army forces in the British Isles. Other top-flight airmen are in command of U. S. land forces at Hawaii, Greenland and in the Caribbean defense zone.

Col. Edgar P. Sorensen has been relieved of his duties as assistant chief of the Air Staff in charge of materiel and supply, and has been appointed director of bombardment aviation on the Staff. He is succeeded by Col. Thomas J. Hanley, Jr., formerly executive officer of the First Air Force Base Command at Mitchel Field, N. Y.



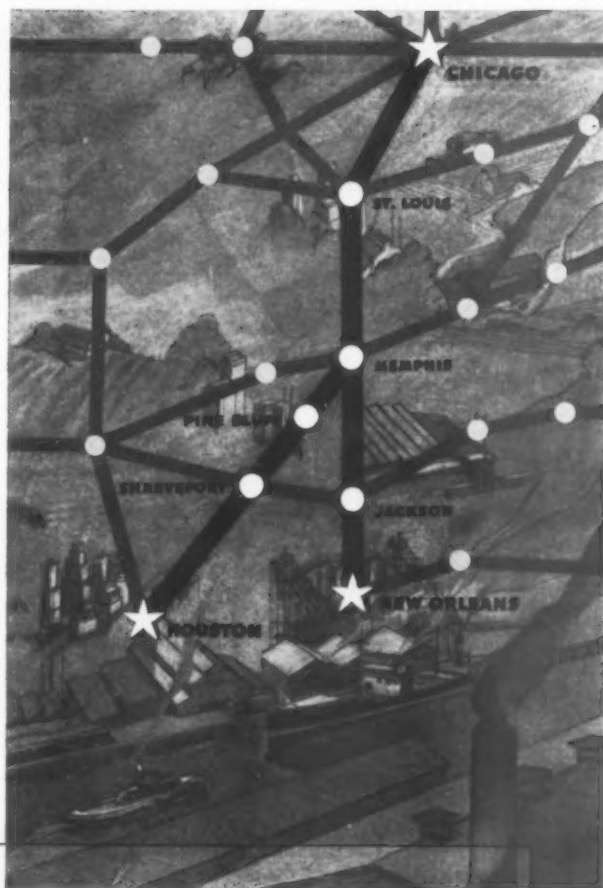
# CHICAGO AND SOUTHERN



## INAUGURATES A NEW SERVICE TO AID OUR **WAR EFFORT**

AMERICA AT WAR demands every facility to speed communications. Our "rendezvous with destiny" can't wait on less than the speed of wings on the home front as well as over our battle lines. With 100% Douglas equipment, Chicago and Southern now makes an added contribution to our war effort with a direct service from Houston and the Southwest to major cities of the North and East. Typical "Dixieliner" timesaving schedules from Houston are: To Chicago 7 hrs. 30 min.; St. Louis 5 hrs. 35 min.; Memphis 3 hrs. 45 min.; Shreveport 1 hr. 25 min.; Detroit 9 hrs. 26 min.; Washington 12 hrs. 20 min.; New York 12 hrs. 10 min.

Douglas Aircraft Co., Inc., Santa Monica



CHICAGO AND SOUTHERN AIR LINES  
**100% Douglas EQUIPPED**

# THEY SEE BETTER WITH RANGER

Today's training tempo . . . busy runways . . . aprons and taxiways crowded . . . novices at the controls . . . makes good taxiing visibility a *prime* necessity. Ranger's six air-cooled, inverted cylinders in line permit ample propeller clearance, yet a cowling so closely streamlined up to the hub as to provide a clear view forward and downward for the pilot in either cockpit.

Ranger's light weight enables *both* cockpits to be set well forward. Hence a student, even in the rear cockpit as shown in this actual photograph, can see ahead and below, where he needs to see, in incomparably superior fashion.

Through thousands of hours every busy day, hundreds of Fairchild M-62 Ranger-powered Trainers (the Army's PT-19) thus waste less time pussyfooting on the ground, spend more time profitably training in the air.



*With Ranger there can be  
no compromise with quality.*



# RANGER AIRCRAFT ENGINES

Farmingdale, L. I., N. Y. • Div. of Fairchild Engine & Airplane Corp.



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## Federal News Briefs for Executives

### OFFICE FOR EMERGENCY MANAGEMENT

Readers wishing to obtain the complete announcement on a subject mentioned below should address their request, with appropriate key number as shown, to Office of Information, Office for Emergency Management, New Social Security Bldg., Washington, D. C.

#### War Production Board

ALL FIELD ACTIVITIES WERE CONSOLIDATED in a new Bureau of Field Operations of WPB. Merged are the 45 regional offices of the old Priorities Division of OPM and 113 offices of the old Division of Contract Distribution. Existing staffs will be retained as far as possible. (WPB 144).

NEW FIELD OFFICES were opened for contract distribution efforts at New Haven, Conn. (Liberty Bldg.), Canton, O. (Commercial Bldg.), Utica, N. Y. (1st National Bank Bldg.), Wausau, Wis. (404 Third St.), Iron Mountain, Mich. (Commercial National Bank Bldg.), Decatur, Ill. (Standard Office Bldg.).

SUBCONTRACTING EXHIBITS are expected to be opened by Mar. 1 as follows: Atlanta (Hurt Bldg.); Boston (Court St. Branch, 1st National Bank); Buffalo (White Bldg.); Cincinnati (Union Central Life Bldg.); Newark (20 Washington Place); Harrisburg (24 E. 4th St.); Kansas City, Mo. (Mutual State Bldg.); Memphis (Sterick Bldg.); New Orleans (Canal Bldg.); Los Angeles (Western Pacific Bldg.); San Francisco (Whitcomb Hotel).

ALIENS MAY WORK ON ANY WAR CONTRACT not classified by the Army or Navy as "secret, restricted or confidential," reported Dr. Will W. Alexander, chief of the Minority Groups Unit of WPB Labor Division. Even when a contract is classified there may be exceptions and procedures under which Army and Navy approval can be secured. A classified primary contract, it was also pointed out, does not always mean excluding aliens from work under a subcontractor.

"The contracting officer, under the law, has authority to decide to what extent and in what way the classification provision of the primary contract may be relaxed to permit employment of aliens on a subcontract." Employers, in any event, may appeal for permits to use such aliens on specific classified contracts. (PM 2426).

CONSERVATION ORDER ON ALUMINUM (M-1-e) is outlined in WPB 42.

PRICE CEILINGS ON WIRE CABLE & CABLE ACCESSORIES are set (PM-2355).

SALES & DELIVERIES OF USED MACHINE TOOLS are controlled by Order E-4 (WPB 112).

ALL PRIORITY ORDERS & FORMS (with a few exceptions) may be reproduced. (WPB 152).

LESS CRUDE RUBBER IN ALL TIRES except those for planes will be ordered. (WPB 151).

NEW APPLICATION BLANK FOR INDIVIDUAL PREFERENCE RATINGS was made available Feb. 2. Use is optional to Mar. 2; mandatory thereafter. (22778).

CHROMIUM WAS PLACED UNDER COMPLETE ALLOCATION. (WPB 127 with text of amended order).

### OTHER GOVERNMENT AGENCIES

#### Selective Service System

MEMORANDUM URGING CONSIDERATION OF DEFERMENT FOR AIRLINE EMPLOYEES was dispatched by national headquarters to state directors. "Air transportation is a vital and necessary adjunct to our defense and war effort," Gen. Hershey wrote. "Serious interruption or delay in the operation of the above services will impede the war production program."

Specially mentioned for consideration for deferment were: supervisory personnel, aeronautical engineers, pilots, navigators, flight engineers, radio operators, both field and crew; radio engineers, pilot instructors, CAA-certificated flight dispatchers, meteorologists, maintenance mechanics, including apprentices; maintenance inspectors, senior storekeepers, engineering draftsmen, equipment utilization engineers, airway traffic coordinators. "The local board should insist on a Form 42A properly signed by an executive officer of the . . . airline to substantiate any claim for deferment."

LOCAL BOARDS SHOULD CONSIDER DEFERMENT OF APPRENTICES who have served a year or more "in trades essential to war production," Hershey asserted Feb. 5 in a directive to the field. Also, "employers should have no hesitancy in continuing existing bonafide apprenticeship programs or in establishing new ones."

LOCAL QUOTAS ARE BASED ON NUMBER OF 1-A MEN AVAILABLE. Headquarters emphasized to state directors. Complaints reaching Washington indicate local boards have taken the position that they have a definite quota to fill, and that in order to meet that requirement they are forced to take a certain number of registrants who would be placed in a deferred class but for the necessity for meeting the call, an official memorandum stated. However, all quotas are now being based not upon basis of registration, but upon the number of men available for service in the armed forces, it was pointed out.

"State headquarters should analyze the boards to be sure they have classified most of the registrants in the 21-36 age group, and in any case any boards show very few remaining 1-A men, calls in excess of those men should be avoided . . . State headquarters should avoid calls upon the boards which would force them to deprive men of deferments to which they are entitled . . . or which would cause them to alter the classification policies . . ."

ENLISTMENT OF REGISTRANTS IN THE ARMY IS PROHIBITED except where local boards certify in writing that such individuals are not key men in war production and that they have not been ordered to report for induction. Adjutant General issued such instructions to all Corps Area Commanders.

DEFERMENT OF PERSONS IN LABOR RELATIONS was subject of a memorandum to local boards urging consideration of requests for special consideration of "duly authorized and competent representatives of government, labor and industry who will, in considering and disposing of questions of mutual interest expedite the successful prosecution of the war."

## Cadets Occupy \$15-a-Day Rooms



WHERE ONCE Northern tourists vied with each other to pay \$15 a day for a room, Air Corps cadets today enjoy the same luxury, get paid \$75 a month for it, while they enjoy Florida's sunshine and learn to fly under the supervision of officers of the Southeast Air Corps Training Center, Maxwell Field, Ala.

The palm-fringed Florida boom-built hotel is now known as Lodwick Inn, a part of Lodwick Aviation Military Academy, owned and operated by Albert I. Lodwick, New York aviation executive, formerly vice president and director of Aviation Corp. He purchased the hotel recently rather than build ordinary barracks for cadets.

### Latest Roster

#### Office for Emergency Management

WAYNE COY, Liaison Officer  
CENTRAL ADMINISTRATIVE SERVICES: Dallas  
Dort, Director.

DEFENSE COMMUNICATIONS BOARD: James  
Lawrence Fly, Chairman.

DEFENSE HOUSING DIVISION: C. F. Palmer,  
Coordinator.

INFORMATION DIVISION: Robert W. Hor-  
ton, Director.

NATIONAL WAR LABOR BOARD: Wm. H.  
Davis, Chairman.

OFFICE OF SCIENTIFIC RESEARCH AND DE-  
VELOPMENT: Dr. Vannevar Bush, Direc-  
tor.

OFFICE OF CIVILIAN DEFENSE: Fiorello H.  
LaGuardia, Director.

OFFICE OF THE COORDINATOR OF INTER-  
AMERICAN AFFAIRS: Nelson Rockefeller,  
Coordinator.

OFFICE OF DEFENSE HEALTH AND WELFARE  
SERVICES: Paul V. McNutt, Director.

OFFICE OF DEFENSE TRANSPORTATION:  
Joseph B. Eastman, Director.

OFFICE OF FACTS AND FIGURES: Archibald  
MacLesh, Director.

OFFICE OF LEND-LEASE ADMINISTRATION:  
E. R. Stettinius, Jr., Administrator.

OFFICE OF PRICE ADMINISTRATION: Leon  
Henderson, Administrator.

CONSUMER DIVISION: Leon Henderson,  
Administrator; Dan A. West, Deputy  
Director.

WAR PRODUCTION BOARD:  
Donald M. Nelson, Chairman.

Henry L. Stimson.  
Frank Knox.

Jesse H. Jones.  
William S. Knudsen.

Sidney Hillman.  
Leon Henderson.

Henry A. Wallace.  
Harry Hopkins.

### Civil Service Commission

NEW EXAMINATIONS FOR JUNIOR AERONAUTICAL INSPECTORS (trainees), at pay of \$2600, are announced for workers needed by Civil Aeronautics Administration, at its standardization and training center at Houston. Vacancies in regular inspector positions at \$3200 to \$5600 a year, in aircraft maintenance, flight engineering, radio and factory, will be filled with trainees completing the course.

EXAMINATIONS FOR AIR SAFETY INVESTIGATORS at \$3,800 for CAB were announced for candidates with 1000 hours and eight years' experience. College study may be substituted for part of this experience.



#### Air Staff Warning The Enemy is All Ears

WAR PRODUCTION BOARD DIVISIONS:  
Donald M. Nelson, Chairman.  
Secretary, Herbert Emmerich.  
PURCHASES DIVISION: Douglas Mac-  
Kearchie, Director.  
PRODUCTION DIVISION: W. H. Harrison,  
Director.  
MATERIALS DIVISION: Wm. L. Batt,  
Director.  
DIVISION OF INDUSTRY OPERATION: J. S.  
Knowlson, Director.  
LABOR DIVISION: Sidney Hillman, Di-  
rector.  
CIVILIAN SUPPLY DIVISION: Leon Hen-  
derson, Director.  
PROGRESS REPORTING: Stacy May, Chief.  
REQUIREMENTS COMMITTEE: Wm. L. Batt,  
Chief.  
STATISTICS DIVISION: Stacy May, Chief.  
INFORMATION DIVISION: Robert W. Hor-  
ton, Director.  
LEGAL DIVISION: John Lord O'Brian,  
General Counsel.

# Obsolete Priority System Threatens '42 Plane Goal

(Continued from page 1)

tracked and scuttled by brass hats in Washington.

Although the lion's share of war expenditures is going or is scheduled to go into aircraft, aviation is without an important representation on the all-important Army and Navy Munitions Board. When Production Chief Donald Nelson recently asked the Board to grant aircraft material and A-1-a priority, the Board refused the recommendation, and suggested an A-1-b instead, a rating which places aircraft behind the bulk of the Navy program, behind battleships, behind tanks, behind trucks, and a host of other war items.

## Face Shortages

While every aircraft manufacturer in the nation is expanding plant facilities, and with huge new plants scheduled to open this year, the aircraft industry is faced with innumerable pending shortages of materials because of the log jam on priorities in Washington, a log jam controlled by old-line Army and Navy chiefs whose first thought of equipment apparently continues to be in terms of battleships and ground equipment.

The material shortage has become so acute that some airplane companies which were ordered to go on a 24-hour 3-shift production schedule in December have actually had to fall back to one and a half shifts for lack of material.

The battleship proponents and the tank advocates have been successful in keeping aircraft priorities at the tag end of the defense program. Today with combat airplanes as the No. 1 necessity, about everything, including the bulk of the Navy program, gets preference over airplanes.

The story behind the lack of material is the story of the Army and Navy Munitions Board which has consistently sidetracked airplane priorities for battleships, tanks and even trucks. The aircraft industry, which is being geared up to meet the President's call for 60,000 planes this year, is being fed materials through a funnel in such a stringent manner that when the new plants open the industry will be operating at far under capacity unless the priority jam is broken.

## Situation Acute

The situation has only become really acute since December when production of every war item was ordered increased. The Harter and other Congressional reports, completed a month or so ago, failed to get to the heart of the priority problem, probably because it was not as acute as it is now. Experts maintain that the 60,000 goal can be met this year but only if the bottleneck is broken in the very near future.

Today the U. S. is in an air war. But today the only war equipment with a Double A (AA) priority rat-



Playing Second Fiddle to Battleships

Fortresses Have 'B' Priority; Has Anyone Told MacArthur?

ing are four battleships—battleships such as the *S. S. Arizona* and the *Prince of Wales*, all as obsolete as a 1907 moving picture. The bulk of the Navy program, the tank program, and much other equipment, have A-1-a priority ratings.

## Fortresses A-1-b

But four-engine heavy bombers, probably the most single vital offensive instrument we need today outside of munition itself, has only an A-1-b rating. It is only one letter of the alphabet removed from the top, but in Washington and in priorities that's a world of difference. Even Navy vessels to be completed in 1943 have an A-1-b rating, as high as the highest aircraft rating in our entire program.

But that's only a small part of the story. Every other fighting airplane—medium bombers, dive bombers, pursuits, interceptors, etc.—has only an A-1-d rating, a rating so far down the priority parade that the other day they were shut off from one of the most vital metals used in their construction. Only the fast work of a handful of aviation people saved the day and obtained a partial but temporarily adequate supply of this metal away from tanks and battleships.

Even aircraft engines have only an A-1-c rating, a rating which is farther removed from A-1-a than its listing in the alphabet would indicate.

The irony is that battleships and tanks are useless without air support—and yet everything that needs air support in war has gotten higher priority ratings than airplanes.

The reason? Part of the reason is the old story of pressure groups,

rivalry, misconceptions, prejudice—the same sort of backward bigotry that persecuted the late Gen. Billy Mitchell. It's the old story of lack of recognition of the airplane. It's the story of Pearl Harbor in somewhat new guise. Even the cavalry takes precedence over the air force in some respects—they have more generals to put over their requests.

Airmen are given slight representation on the Army and Navy Munitions Board, which is the agency designated and authorized to tell the nation's production chiefs what to build first and which item shall get top priority.

Tried and true airmen, men like Lt. Gen. H. H. Arnold, Adm. Jack Towers and Assistant Secretary of War for Air Robert Lovett, have pleaded ceaselessly for higher ratings for airplanes, but they have pleaded into deaf ears. The Washington brass hats have scarcely budged. The most they have ever conceded is a small compromise. Ever since the first airplane flew in 1903, aviation has been used to taking a back seat in Washington.

## Takes Back Seat

It still is taking the back seat but if production goals are not met for 1942 the answer won't be hard to find. It won't be the President who gave the order, it won't be the Air Corps which has built plenty of plants, and it won't be the industry.

Even Production Chief Donald Nelson has lost his first skirmish with the Army and Navy Munitions Board. A few weeks ago he sent a directive to the Board requesting its approval of an A-1-a rating for all combat airplanes. The Board rejected the recommendation! As a compromise it suggested an A-1-b rating for all combat planes, which would still keep airplanes behind the bulk of the Navy program, be-

hind all tanks and a lot of other equipment.

But Mr. Nelson will have to face the issue again, because if he doesn't the vast airplane production program of the U. S. will bog down.

Six months ago there appeared to be plenty of material for all essential war needs. Even three months ago it wasn't acute. When the President stepped up the program, shortages began to appear rapidly. The Army and Navy Munitions Board has not presented a unified plan outlining what weapons should be produced first in quantity.

## Out in Cold

Unless the entire priorities system is reorganized, airplanes will be left out in the cold because an A-1-d or even an A-1-b will not suffice to keep the industry operating at capacity. As a matter of fact, the industry isn't moving at capacity today. And there are a great many new plant facilities not yet open.

Here is what actually happened just recently which demonstrates how invalid the present priorities system works. Metal Z is an important item in defense work. It is not by any means the most important, but it is absolutely essential for airplanes. Six months ago there was an abundance of Metal Z. Then came Pearl Harbor. The demands for Metal Z increased many times over.

In fact Metal Z became so scarce that an order went out restricting its use only for those defense items with Priorities A-1-a, A-1-b, and A-1-c. This left out all medium bombers, pursuits and other types of airplanes (except four-engine bombers). The production program was threatened in short order.

An investigation revealed that the top three priority ratings had plenty of Metal Z, and that by cutting their allocations 10%, 85% of the requirements of airplanes for Metal Z could be met and in addition about 65% of all requirements for the A priorities clear down to A-1-j.

The weakness in the whole system is that no attention has yet been paid to a balanced diet of materials for all vital defense work and that instead of distributing materials down the line, the priority system cuts off near the top. Aircraft companies have been seriously handicapped on top of this by the fact that except for heavy bombers they are at the tag end of the vital defense needs—at least as far as the War and Navy Munitions Board is concerned.

Another evidence of how aircraft has been sidetracked in Washington is on the planning committee of the War Production Board. Not a single aeronautical expert has been appointed on this committee as this issue goes to press. This problem is up to Mr. Nelson.

Still another serious handicap has arisen to threaten aircraft production. This, too, is directly traceable

(Turn to page 16)



AMERICA MUST BE  
FIRST IN THE AIR

Unless and until America is the most powerful nation in the air, our safety, our freedom, and our standard of living will not again be what they have been in the past.

*W. H. Whitefield*

# How the Greatest Name in Rubber became a Great Name in Aviation

**T**ODAY Goodyear is one of the nation's foremost builders of light metal-alloy sub-assemblies and parts for the mighty new air fleets that will win victory for America.

How Goodyear comes to be building them is a story of unswerving faith in the future of aerial transportation that goes back to the dawn of aviation.

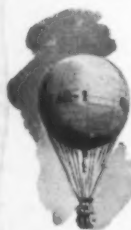


It begins with our development of the first practical airplane tire in 1909. Then airplanes were still using primitive undergear—sled-runner skids, or bicycle tires that often burst and ripped off under landing impacts.

The new Goodyear "Aeroplane" tire made take-offs and landings so much easier and safer, many airplanes were using it by 1910.

Next we learned that aviators were complaining about wing coverings. The varnished canvas then used stretched and flapped in flight, retarding speed.

Our solution was the development of a stretchless rubberized fabric, so tight-fitting it added 5% to an airplane's speed. At the 1911 Chicago Aero Meet nine out of ten planes had Goodyear-covered wings.



This success led us to build a giant 80,000 cubic foot racing balloon of similar fabric—the famous Goodyear 1. In 1913 it won the Paris International Balloon Race and brought the James Gordon Bennett Cup back to the United States.

So when the World War came, both the Army and Navy turned to us for lighter-than-air patrol and observation craft. More than 40 non-rigid airships or "blimps," and upwards of 800 "sausage" balloons were delivered to the U. S. forces.



Shortly after the armistice Goodyear completed development of the first rubber-covered, bullet-puncture-sealing gasoline tank for airplanes.



During this period airplanes were becoming larger, faster and heavier. Smooth, safe landings became difficult on hard, high-pressure tires.

Goodyear met this with the low-pressure type Airwheel that has since revolutionized all tire design.

In 1928, when the Navy decided to build two giant rigid airships, they naturally turned to Goodyear as the nation's most experienced builder of airships. In constructing these great ships—the largest aircraft ever built in America—we faced the problem of obtaining stronger dura-

lumin alloys than this country had ever produced.

As a result of Goodyear's efforts to secure stronger, lighter alloys for airship fabrication, America today produces alloys for airplanes far superior to any known twenty years ago.



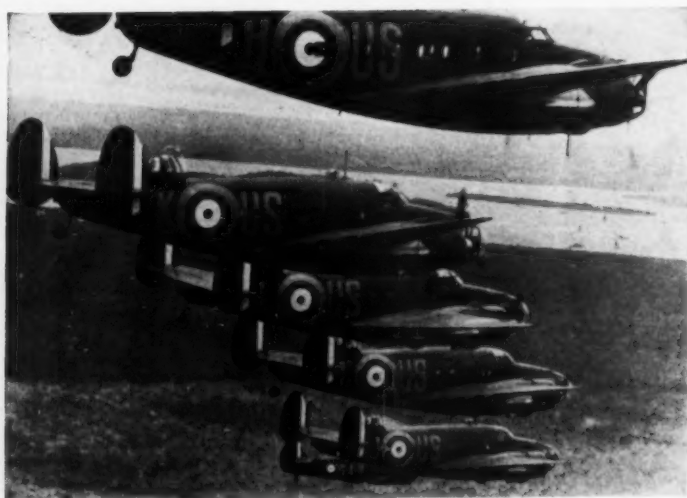
During the thirties we developed featherweight magnesium-alloy wheels for transport airplanes, and hydraulic disc brakes that pack tremendous stopping power in small compass.

Today Goodyear's great aircraft parts factories are producing complete all-metal wing and tail assemblies, nacelles, floats, ailerons, cabin structures, bullet-puncture-sealing gasoline tanks, wheels and brakes—in ever-growing torrent.

Upon this work we are devoting all the aeronautical experience and skill acquired in thirty years of pioneering, in full realization that our liberty is not secure until America commands the air.







Lockheed Hudsons Setting Out on Patrol  
Royal Australian Air Force at Work Near Singapore

## Plane Materials Diverted

(Continued from page 14)

to the failure of the Army and Navy Munitions Board to grant an A-1-a priority for combat aircraft. A number of leading manufacturers have reported that they are losing some of their most important subcontractors to producers of shipping, tanks, and other weapons who have higher priority ratings. Aircraft officials claim Washington is responsible for this "stealing" and if this keeps up much longer, the aircraft industry will be even farther behind in its subcontracting.

On the side of the subcontractors, they have been unable to sit back and wait for a small dribble of material. They are working for the industries with highest priorities and highest priorities are not for airplanes. The irony in this picture is that some of the subcontractors who have turned over their facilities to tank companies were actually financed and put into business by aircraft companies.

One of the most dangerous shortages is aluminum. Up until recently, according to authentic reports, the Navy was still using aluminum on chairs and other accessories aboard battleships despite the need for this metal for airplanes.

Until recently the U. S. has been using only about 65% of its aluminum in airplanes, while the British are reported to be putting 95% of their supply into planes. Within recent weeks, however, general uses of aluminum have been further restricted and an estimated 80% will go into aircraft.

One well-informed authority stated that the 60,000-plane goal can be reached in 1942 if the priority muddle is remedied at once. Production increased steadily all during 1941, and has continued the upward trend. But without an immediate remedy, the production chart is expected to go down instead of up as one material after another becomes short.

On the other hand, the material problem is one of planning and distribution and this planning and distribution has been lacking under the existing priority system.

Experts are agreed, however, that unless material for aircraft is given the same priority attention and rating as material for battleships, tanks, and trucks the aircraft production will be considerably under the 1942 goal.

## Southwest Conference Off

The 5th Annual Southwest Aviation Conference, scheduled for Apr. 23-25 at Kansas City, Mo., has been canceled because of the war.

Board members of the Women's National Aeronautical Association

will meet on Feb. 15 to determine whether the WNAA's annual convention, scheduled Apr. 23-25 in Kansas City, should also be canceled.

## What Others Say

VISCOUNT TRENCHARD, Marshal of the RAF—"We cannot be stronger than the enemy everywhere all the time. If we could be, it would cease to be relevant because the war would be won. So we must use our air resources flexibly as our major national strategy demands at the time, as the Germans do. We can only do that if we have a single autonomous air service as the Germans have, based by Goering's own admission on our model."

HUGH S. JOHNSON—"The leading military lesson from this war seems to be that there is no leading lesson from this war."

WILLIAM COURTENAY, organizer of London's balloon barrage defense—"German air raids on the (U. S.) Atlantic coast are so feasible I am surprised they have not happened. Even one raid a week makes blackouts necessary all along the coast and slows down production enough to make the effort worth while."

FLIGHT (British)—"One unexpected result of the German occupation of France has been the conversion of the short-range fighter of the RAF into an offensive weapon . . . our offensive has not been unduly expensive."

CHARLES T. MALONE, president, American Glider Association—"There were 69 Americans trained the glider way by the French, out of a total of about 160 in the LaFayette Flying Corps. Of those 69 none has ever been killed in a flying accident. Of the others, I would say that more than 10% were killed in flying accidents, either at school or shortly after school."

CARL W. ELKINS, sales manager, Taylorcraft Aviation Corp.—"Why not enhance the CPTP by adding draftees or enlisted men to those eligible for flight training? This idea should be advantageous from several standpoints. First, all participants in this category are assured immediately for the air forces. Second, the same equipment, personnel and instructors can double or treble the output of pilots. Third, by giving enlisted men and draftees opportunity for aviation training, it will be possible to regulate training with military precision, thereby utilizing at all times the equipment available. The expansion of the air forces can thus be accomplished with maximum speed and efficiency."

THE AEROPLANE (British)—"Japan's attack on Pearl Harbor on Dec. 7 was made easier by entirely insufficient camouflage, by the absence on leave of most of the naval personnel and by clouds which gave cover to the attacking bombers and torpedo airplanes. These facts were told by Maj. Gen. Rudolph von Oyen, chief of the Royal Netherlands East Indies Air Force, who was at Pearl Harbor during the attack. He said that American airplanes were unable to take off for some hours."

DR. ROBERT A. MILLIKAN, president, California Institute of Technology—"Removal of war industries at this stage from either of the coasts to the inland would clearly be the most effective way to help win the war for the Japs and the Nazis . . . The president of one of the big companies told me it would be throwing away a year of production to make the changes in the location of his plant."

ARMY-NAVY JOURNAL—"It is interesting to note the number of Air Corps general officers that are being placed in key commands for the defense of the U.S. In the past few months, as more and more impetus has been laid on airpower, there have been quite a number of general commands of strategic defense possessions that have been placed in the hands of air officers."

CHARLES P. GRADDICK, United Air Lines' director of mail and express—"Having been in the government a great many years, the writer has observed that one of the reasons government gets into private business is that business people will not always work together in solving their own problems and all too often one of the disgruntled parties will run to Washington calling for control and regulation only to shout loudly against government 'interference' once it has been granted."

EDITOR & PUBLISHER—"Rumors travel in Washington almost with the speed of light."

**Franklin**  
**FINE AIRCRAFT ENGINES**

★ AIRCOOLED MOTORS CORPORATION ★ SYRACUSE, N. Y. ★

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**GENERAL**  
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To the manufacturer who originated, developed and patented the streamline, smooth contour principle, out of which the modern airplane tire has come . . . To the manufacturer who served our armed forces long before the war . . . American Aviation now turns for tires equal to the tremendously increased strain of modern-day take-offs and landings. All-out for war and all-out for safety, General is demonstrating daily that it has what it takes to meet the vital demands of wartime aviation.

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# American Aviation



The Independent Voice of American Aeronautics

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## Fortnightly Review

(Continued from page 1)

only an A-1-b priority, while the remainder of our combat aircraft rate only an A-1-d priority, far behind the parade of much other defense materiel. Engaged as it is in an air war of world-wide ramifications, the U. S. still faces its toughest of all problems right in Washington. Production Chief Donald Nelson is powerless until the Army and Navy Munitions Board loosens up and puts combat aircraft in A-1-a where they belong. But Production Chief Nelson can help break the priority jam by appointing one or two top-flight aviation men to his WPB planning committee. Air Wars can't be won without air men sitting at the controls.

The other enlightening quotation supplied by Correspondent Guard came as he was describing his visit to the vacated \$400,000,000 Naval base at Singapore. He cabled as follows: "I remembered what Admiral Layton used to say to me: 'There's 26 square miles of deep sea anchorage . . . Enough to accommodate the entire British and American fleets.'"

Yes, a \$400,000,000 Naval base made useless without a single shot from a battleship. A \$400,000,000 expenditure for a base whose only real defense was against a sea attack! It is another ironic and historic lesson of unpreparedness for the type of warfare now being waged. Half of that expenditure in combat airplanes strategically based in and about Singapore would probably have prevented the Japs from even starting on their southward trek.

Slowly but surely there is an awakening to the meaning of the airplane in this world-wide war. The New York Times has become a consistent expounder of the ramifications of this air war. At long last, even Time gave splendid recognition of Bob Lovett's tireless espousing of the air cause. But the real deep-seated problem that needs eradicating immediately is that of priority of material for airplanes. In this day and this year, the low rating afforded combat aircraft is an inexcusable blunder and a national disgrace.

## Messrs. Pogue and Mason

THE NEW CHAIRMAN of the Civil Aeronautics Board, Mr. Welch Pogue, has shown every indication that he is trying hard to revive the Board and convert it into a realistic and practical administrative body. He has entered into his new responsibilities with refreshing energy and an alert and inquiring mind.

It is with earnest hope that we suggest that Mr. Pogue and his colleagues get about the country at intervals and find out what is going on in the very active and defense-minded air transport industry. The Board members should not be "stay-at-homes." A trip to an operations base bustling with all manner of air activity should be a "must" for every member. The Board has needed closer touch with thinking and activity in the field and we believe Mr. Pogue will lead the way to a new era of exploratory action. Out of such field contacts and studies can come real understanding and planning for the future.

Before Mr. G. Grant Mason leaves soon for South America in his new duties with the Defense Supplies Corp., we should say a word about this former Board member who was succeeded by Mr. Pogue. Because he took his duties very seriously, and thus did very little talking outside of Board meetings, Mr. Mason was a rather anonymous figure on the Board since its creation in 1938. But the records will show in time that he was one of its most constructive members, a 'rebel' who pleaded for action and expansion, and whose knowledge of the industry gave the Board its only real industry approach to transport problems. It was Mr. Mason, more than any other member, who anticipated and attempted to prepare for, the war problems the Board now faces. He was a valuable member and carries with him in his new work the good wishes of a wide portion of the industry.

## Hard Up for Stories

AN ARTICLE more noteworthy for naivete than for accuracy in the Feb. 7 New York Herald Tribune leaves a strong inference that the technical and aviation trade press is violating censorship rules and divulging secret information to the enemy. The newspaper story comments particularly on advertisements of aircraft companies in the Feb. 1 issue of AMERICAN AVIATION, although the name of this publication is not mentioned. Newspapers and the trade press operate under the same censorship rules. For the information of certain newspapers, the aircraft industry submits advertising copy for approval before publication, at least if there is any question of defense information involved. The same holds true for photographs.

An interesting sidelight on the newspaper story is that a few days earlier this same paper published rather complete information about a new bomber plant to be erected in Chicago, information supposedly very secret. The fact that a high Army official innocently gave out the story—thus relieving the daily press of any responsibility—hardly changes the fact that the trade press was not permitted to print anything about the new plant until the daily press spread it over the country for all to see. Furthermore, we were informed officially by one of the military services that its request to press associations to stop the story mentioned above was ignored.

But censorship is a disturbing problem to all editors, and in our opinion most members of the Fourth Estate are doing their best. The Herald Tribune story is in bad taste.

## Going to Work

IT IS A WHOLESOME characteristic of American press agency to promote through rose-colored glasses anything and everything. For years the publicity mills of the aircraft industry have been hard at work and the prolific artistry which has been turned out has glowed in half-tone engravings and four-color plates from the pages of our national publications. It wasn't so long ago that the U. S. had the greatest air fleet in the world, on paper, and more of the finest and fastest airplanes—one of each model—than any other country on earth.



Perhaps the press agents over-did the job several years back because the public, undoubtedly, thought the U. S. had many thousands more airplanes than we actually had although we weren't kidding any of our potential enemies because we took pride, at the time, in letting them know just about everything we had and didn't have.

The ballyhoo is over. The nation is getting geared to grim realities of production and the world will see production of a magnitude never dreamed of anywhere except in this nation. It probably is a good thing for the public that production figures and performance figures of new models are prohibited. We've done too much bragging about what a single new model will do and not enough work producing a lot of those models. The industry publicity crews can devote their time to sound public relations instead of rushing onto the front pages with the latest super-duper pursuit and super-colossal bomber. Let's go to work.

## Pro, Con and Otherwise

### Moved and Seconded

We note with a great deal of pleasure your editorial, "Wasting Our Training Facilities," in the Feb. 1 issue of your excellent magazine. Earlier this week we mailed a letter to Robert Hinckley, containing very similar sentiments.

Sometimes we wonder whether our Army and Navy are fully aware of the fact that we are at war, or whether they are just having an exciting time playing cowboys and Indians.

It is inconceivable to any business brain that the wealth of training facilities, fixed bases, well equipped shops, and aeronautically experienced executives is being completely disregarded at a time when it could contribute immeasurably to the war effort.

Isn't there someone in Washington who can still think clearly? We believe this entire situation is vital enough to the country's welfare to make an issue of it. Perhaps if we yell loudly enough, and soon enough, we can reach the ears of someone who will do something before it is too late.

Since AMERICAN AVIATION is in the admirable position of being able to fight for what it thinks is right, why don't you start pounding away? We will be glad to help in any way possible. Just call on us.

GUY MILLER  
President  
Wings Field Inc.

Ambler, Pa.

Please accept my vote of thanks for your article in the Feb. 1 issue entitled "Wasting Our Training Facilities." I would be willing to bet that you will receive hundreds of letters along the same line.

Frankly speaking, I feel rather helpless as far as rectifying the situation is concerned but I assure you that I will be only too glad to try to do anything you might suggest to more forcefully bring this situation to the attention of the right people.

W. B. Sr. JOHN  
Sales Manager  
Piper Aircraft Corp.

Lock Haven, Pa.

### ALMA Honored

We wish to express our appreciation for the picture and items

relative to our fourth convention which you published in the Jan. 15 issue of AMERICAN AVIATION. We think you have an excellent trade magazine and it is indeed an honor to have you devote space to our organization.

J. L. MCFARLAND  
International President  
Air Line Mechanics Assn.

Chicago, Ill.

### 'Outstanding'

I want to take this opportunity to tell you how much we enjoy AMERICAN AVIATION. I can really say without hesitation that we consider it here the outstanding information source available in the industry today.

T. J. KIRKLAND  
Panagra

Lima, Peru

### 'Grand Publication'

I don't know what we in the airline business did before you started to print AMERICAN AVIATION. It is a grand publication and we all enjoy it.

W. NELSON BUMP  
American Airlines

Boston, Mass.

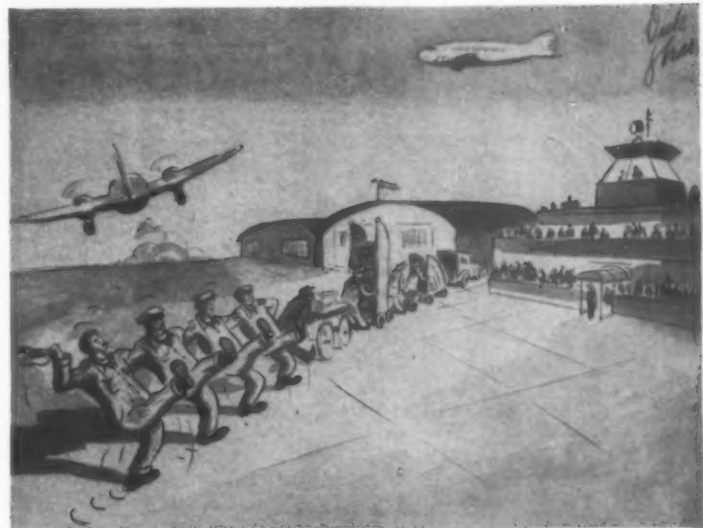


AIR PILOT TRAINING, by Bert A. Shields, Whittlesey House-McGraw-Hill Book Co. Inc., 330 W. 42d St., New York, N. Y.; 602 pp.; \$4.

This volume covers all the essential material required for private and commercial pilots' licenses, in a manner conforming to the courses set up by the CPT programs. There are frequent photographs and line drawings to supplement the simply and clearly written text.

Intended primarily for flight students who wish to study the basic work at home, the book in four parts covers: Aircraft and Theory of Flight, Aircraft Engines, Meteorology, and Air Navigation.

The author has had 24 years' experience as a pilot; and his logbook shows over 5,000 hours of all types of flying, including military and commercial flight instruction. He has taught courses at New York University, Columbia, and Brooklyn Polytechnic Institute.



PILOTS AND MECHANICS' AIRCRAFT INSTRUMENT MANUAL, by G. C. DeBaud, Ronald Press Co., 15 E. 26th St., New York, N. Y., 490 pp.; \$4.50.

This textbook on aircraft instruments is designed to meet the requirements of thorough, systematic courses in technical and aviation schools and the needs of those who wish to acquire a complete understanding of instruments but do not have the opportunity for an instructor's guidance. Complete information on all types of instruments—flight, navigation, and engine—is presented, directly and unencumbered with extreme technical detail.

### Other New Books

AIRCRAFT SPOTTER, by Lester Ott. An excellent catalog for the layman as an aid in aircraft identification of military planes in active service in the American, British, German, Italian, Japanese, and Russian forces. Harcourt, Brace & Co., 383 Madison Ave., New York, N. Y.; 64 pp.; \$1.

BLUE PRINT READING BOOK, New Edition, by A. F. Davis, vice-president, Lincoln Electric Co. A text intended to enable welders and mechanics to learn blue print reading by a few hours' sparetime study. Lincoln Electric Co., 12818 Coit Road, Cleveland, O.; 146 pp.; 96 drawings; 50c.

### Obituary

#### Gen. Patrick Dies

Maj. Gen. Mason M. Patrick, retired, former Chief of the Army Air Service, died at Walter Reed Hospital, Washington, D. C., Jan. 29, at the age of 78.

Maj. Patrick, though originally trained in military engineering, was placed in charge of the Army air units in Europe during the last World War. After the war, on Oct. 5, 1921, he was made first chief of the Army Air Service, and served at that post until his retirement on Dec. 13, 1927.

He was born Dec. 13, 1863, at Lewisburg, W. Va.

#### Louis W. Greve

Louis W. Greve, 59, president of Cleveland Pneumatic Tool Co. and

### Calendar

(Events listed below are subject to cancellation without notice)

FEB. 21-MAR. 1-2d Eastern Light Airplane Exhibition, Grand Central Palace, New York, N. Y.

MAR. 2-6—American Society for Testing Materials, Spring Meeting, Hotel Cleveland, Cleveland, O.

MAR. 12-13—Society of Automotive Engineers, Aeronautic Meeting, Hotel New Yorker, New York, N. Y.

MAR. 23-25—American Society of Mechanical Engineers, Spring Meeting, Houston, Tex.

APR. 23-25—Women's National Aeronautical Association, Annual Convention, Hotel Phillips, Kansas City, Mo.

MAY 1-2—3d New England Aviation Conference, Providence, R. I.

MAY 31-JUNE 5—Society of Automotive Engineers, Semi-Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

JUNE 8-10—American Society of Mechanical Engineers, Semi-Annual Meeting, Cleveland, O.

JUNE 22-26—American Society for Testing Materials, 45th Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J.

OCT. 12-16—National Metal Congress and Exposition, Detroit, Mich.

a director of the now discontinued National Air Races, died at Ft. Lauderdale, Fla., on Feb. 2 of a heart attack. He sponsored the Greve Trophy at the air races and was in charge of his company's aviation department.

### Douglas Van Buskirk

Flying Officer Douglas Byrd Van Buskirk of the RCAF, formerly employed by Canadian Colonial Airways and TWA, was reported dead on Feb. 5, having been missing since Nov. 7. The British Air Ministry reported that Van Buskirk died at the controls of his Stirling bomber while on a mission over Germany.

# THERE'S ONLY One Best-

*and* when it comes to aviation commentators, he's unquestionably Cy Caldwell. None match his penetration, his accuracy in predictions, his clarity, his wit.

*Cy Caldwell*  
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**MARCH ISSUE**

## **FLYING**

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# Chrysler Plant to Build Wright Engines

## Industry Spurs Construction of More Facilities

By CHARLES ADAMS

**A**NNOUNCEMENT of the award of a \$100,000,000 contract to Chrysler Corp., which will build a 2,000,000 sq. ft. factory in Chicago to manufacture Wright aircraft engines in the 2,000-hp. class, was made last month by Lt. Gen. William S. Knudsen.

His revelation, which caused consternation in the War Dept., again threw the spotlight upon the vast program of aircraft facility expansion which was undertaken during the first two months of active U. S. war participation.

Since Dec. 7, billions of dollars in new supply contracts and letters of intent have been received by aircraft manufacturers, and new construction costing hundreds of millions of dollars has been given the green light. But news of this type has been and will remain on the restricted list, with few exceptions.

Plans for the Chrysler plant call for buildings which will occupy 45 acres and employ 25,000 workers when peak output is reached. Construction on the factory is scheduled to start within the next few weeks, with production of the first engine expected before the first of 1943.

### Third in Chicago

The new Chrysler unit will be the third large aircraft engine factory to be built in the Chicago area under the late defense and present war program. Buick is already turning out engines at its 1,320,000 sq. ft. Melrose Park factory, and the Studebaker plant is also starting operations.

Meanwhile, the development of a new center of aircraft manufacturing activity in the Rocky Mountain area is being given serious attention. Under the defense program, new bomber plants were built largely in the "strategic defense area" located roughly between the Appalachians and the western slope of the Rockies, and away from either border. New assembly units have gone up in what may be termed the central region—Texas, Kansas, Oklahoma, Nebraska and Michigan, with more coming.

Now the western fringe of this strategic area seems likely to get new aircraft factories. Sites mentioned include Denver, Colo., and Salt Lake City, Utah.

### No Removal Plans

Despite continued reports to the contrary, the government plans no removal of Pacific Coast aircraft plants to the Midwest. Lt. Gen. H.



**Patterson Plan in Practice:** An effort by Undersecretary of War Robert P. Patterson to have "soldiers on the production line" meet "soldiers of the firing line" is having a morale-building effect in aircraft plants and at Army training centers. A joint delegation of CIO and AFL leaders are shown above as they arrived by plane from Washington to inspect activities at Maxwell Field, Ala. The crowd below stands at attention outside of Lockheed Plant No. 1 during a visit by Brig. Gen. Ord Ryan and a group of Air Corps officers.

H. Arnold declared recently that the possibility of moving Pacific defense plants had been given "very careful and thorough consideration," but that "it would probably cost more in airplanes to move the existing plants than to leave them where they are." New plants going up in the interior will provide us with secondary sources, which may even turn into primary sources as they develop, he said.

Emphasis in providing additional facilities is not, however, upon new construction, but rather on conversion of machines and floor space not now used for defense work to the production of aircraft, parts, and accessories.

Grumman Aircraft Engineering Corp., for instance, has begun a survey of all garage facilities of 10,000-15,000 sq. ft. within a radius of 10 miles of its Bethpage, N. Y., plant with an eye to their utilization as "dispersal units." Similar activity is reported in the Southern California area.

(Tremendously important in view of the necessity for speed in production will be the millions of square feet of floor area that will not have to be provided because of increased efficiency in present facilities.)

### Only the Best

(Programs such as the Boeing-Vega-Douglas and the Vultee-Northrop pools have tended to bring about maximum bomber output from a given number of square feet of manufacturing space. This sort of practice will be, and, in fact, is now being extended to pursuit ships. Standardization of production techniques, elimination of certain types of aircraft not deemed vital, and concentration on one model in one factory will enable aircraft firms to wring maximum output from their facilities.)

(The government will push to the limit its policy of refusing to order a "good" combat plane from Com-

## A BREAK for LA Swing Shift Workers

REPEAT radio programs will be given by KNX of the Columbia Broadcasting System, Los Angeles, for the benefit of defense workers in that area.

Swing shift workers and entire communities complained that they were missing day-time and early evening programs in which they were interested.

Knocking off work and dining at midnight, these men and their families have adjusted their lives to a night routine and are accustomed to stay up until at least 6 A.M.

Now, through special programs beginning at midnight and continuing until the early morning programs begin, they will be able to enjoy their own programs of good music, late news bulletins, swing sessions and drama, including recordings of many of the more popular regular features.

It is predicted that radio stations in other communities will inaugurate similar midnight to 6 programs.

pany A merely because that firm has the tools and facilities to turn out such a ship. Rather, Company A will be ordered to cease production on its own model and begin work on the craft turned out by Company B, which has developed a plane more suited to present needs.)

Col. John H. Jouett, president of the Aeronautical Chamber of Commerce, declared recently that if the nation is to meet the President's program for 60,000 planes in 1942 and 125,000 in 1943, "we must find means of increasing factory floor space from the present 50,000,000 sq. ft. to more than 80,000,000 sq. ft. this year and then boost it to more than 180,000,000 sq. ft. for the next year's program.

### Rise in Personnel

"A material increase in factory space will result when the subcontractors start operating new plants now nearing completion, when our companies get into production with the new assembly plants for which the subcontractors in the motor car industry are making parts, and, finally, when the motor car manufacturers themselves achieve full production in the plants built for this purpose."

Col. Jouett indicated that this increase in factory floor area would necessitate the lifting of employment in the aircraft industry from about 400,000 at present to more than 700,000 within the next few months and upward of 2,000,000 including those in automobile plants, to produce 125,000 planes next year.



# Canada Limits Output to 7 Types With Emphasis on Advanced Trainers

## Secret Plane In Making; 8,190 on Order

HAVING manufactured or assembled about 5,000 planes since the war's outbreak, Canada's aircraft industry, still producing 40 units per week and preparing to concentrate on seven types, hopes to have 10,000 planes in the air by the end of 1942, of which 80% will be from Dominion plants.

In a report on Canadian military aviation from the time the country entered war to Dec. 31, 1941, the *Financial Post*, Toronto, reveals that aircraft purchases on the Canadian account during that period totaled \$344,207,522. Contracts placed by the Civil Aviation Division for airport construction under the Air Training Plan, for Canadian, United Kingdom, and other accounts, totaled, during the 17½-month period, \$33,000,000.

Total number of planes now on order, according to the report, is 8,190, of which 5,046 will be trainers, and 3,144 of the service type. Most of the latter will be sent to Great Britain, it is indicated. Emphasis in Canada now is expected to be on advanced trainers and service-type planes.

The seven types to be concentrated on in 1942 are:

Fairchild Freshman, by Fleet Aircraft Ltd.

Harvard, by Noorduy Aviation Ltd.

Canadian Anson, by Federal Aircraft Ltd.

Bristol Bolingbroke, by Fairchild Aircraft Ltd.

PBY Catalina, by Boeing Aircraft of Canada Ltd. and Canadian Vickers Ltd.

Lancaster, by National Steel Car Corp. Ltd. and Canadian Car & Foundry Co. Ltd.

A "secret plane," by deHavilland Aircraft of Canada Ltd.

In addition, Canadian Car is tooling up for production of Curtiss SB2C-1 dive bombers (see story elsewhere).

In the past, Canada has produced the following planes: Elementary trainers—Fleet 16B, Tiger Moth, Menasco Moth.

Advanced trainers—Fleet 60, Harvard, Anson.

Service craft—Shark, Delta; Grumman, Lysander, Norseman, Stranraer, Hurricane, Bolingbroke, Hampden.

Recent plans indicated that Canada's aircraft industry would soon begin production of impregnated hardwood propellers similar to popular types used in England.

Nearly 34,280 workmen and tech-



The NA Harvard  
By Noorduy Aviation Ltd.



The Canadian Anson  
By Federal Aircraft Ltd.



The PBY Catalina  
By Boeing, Canadian Vickers



The Fairchild Freshman  
By Fleet Aircraft Ltd.

nicians, including large numbers of girls, are at work on new Canadian aircraft. Personnel has risen from 2,271 before the war to 4,949 in Dec. 1939, 16,000 in Dec. 1940, 26,000 in June 1941, and 31,380 in Oct. 1941.

Floor space occupied by the Dominion's aircraft industry increased from 285,650 sq. ft. in pre-war-1939 to about 2,901,750 sq. ft. at present.

Canadian plants listed to do special kinds of aircraft and maintenance work are as follows:

Airframe overhaul, 22; engine overhaul, 14; airframe and engine overhaul, 5; propellers, 5; instruments, 8; electrical spares, 6; batteries, 10; tires and tubes, 4.

A review of individual company activities, as given by the *Financial Post*, follows:

### Boeing Aircraft

Boeing Aircraft of Canada Ltd., at Vancouver, B. C., more than doubled its payroll since Mar. 1941 to 2,600. Orders on hand total \$10,500,000, excluding overhaul work.

## Canada Sends Workers To West For Training

CANADA will send 100 aircraft workers to California for special courses in production methods, according to an announcement of a Labor Department spokesman in Ottawa.

The trainees will study for three months at Los Angeles Technical Aircraft Institute at the expense of their employer and the Labor Department's War Emergency Training Program.

To supplement this home-study courses in aircraft construction are to be provided for 1,000 other Canadian aircraft workers.

Firm has a "big contract" for production of the Consolidated PBY Catalina.

Floor area is 392,000 sq. ft.; annual payroll, \$4,000,000.

## Canadian Car & Foundry

Canadian Car & Foundry Co. Ltd., Montreal, Que., with plants at Montreal, Ft. William, and Amherst, N. S., is at present "the largest in the field," with a total floor area of 838,500 sq. ft. and 8,400 employees.

Firm is nearing the end of an initial order for 1,200 Hurricanes and is cooperating with National Steel Car Corp. Ltd. on production of a \$75,000,000 order for the 30-ton, four-engine British Lancaster heavy bomber. U. S. built engines will be used in the bomber—the biggest craft of its kind ever built in the Dominion—and its 7,000-mile range will enable it to be flown direct from Canada to Britain.

Canadian Car's share of the Lancaster project will probably be filled at its Ft. William, Ont., plant, where Hurricane fighters are being built for the RAF.

## Canadian Vickers

Canadian Vickers Ltd.'s Aircraft Division at Montreal holds an order for 39 Consolidated PBY-5 Catalinas, costing \$7,400,000, with first output scheduled for April, according to recent reports. Company in November delivered the last of an order for 40 Stranraer flying boats for the RCAF, four months ahead of schedule.

Firm will take over the assembly plant of Canadian Associated Aircraft Ltd. at St. Hubert Airport when the last of the Handley-Page Hampden bombers is flown away, and will assemble the PBY's at that point. In the meantime, Canadian Vickers will continue production on subcontracts, such as engine mounts for the Ansons and parts for the Bolingbrokes.

Floor area is 300,000 sq. ft.; employment, 2,200.

(Turn to Page 28)

## Dominion to Make Curtiss SB2C-1s, Ranger Engines

CANADA's aircraft industry in 1942 will prepare itself for output of two additional products of the U. S. aircraft industry—the Curtiss SB2C-1 dive bomber and the Ranger in-line engine.

Canadian Car & Foundry Co. Ltd. is being awarded a \$60,000,000 contract by the Department of Munitions and Supply for manufacture of more than 1,000 of the Curtiss dive bombers, according to C. D. Howe, minister of Munitions and Supply.

The order will occupy full facilities of the company's Ft. William, Ont., plant and the "greater part" of the firm's facilities at Point St. Charles, Montreal, "until late in 1944."

Contract calls for 12 months of sustained peak production, with maximum output of 80 planes a month. First unit is expected early in 1943. Preliminary tooling already is underway for the production of the dive bombers. While these preparations are in progress, production of Hurricane fighters for



Britain will continue at the rate of 100 per month.

Canadian Car was to have joined National Steel Car Corp. in the manufacture of four-engine Lancasters. Victor M. Drury, president of Canadian Car, announced that his firm would not now participate in the Lancaster order, but would devote itself to the SB2C-1.

Manufacture of Ranger engines will begin shortly in Chrysler plants in Ontario, R. P. Bell, director-general of Canadian aircraft production, revealed shortly after the report on the Curtiss dive bombers was released.

"This will be the first attempt to manufacture aircraft engines in the Dominion," Bell said. Production quota on the Rangers has been set at 300 per month, and they will be used in the Dominion with Fairchild trainers, now licensed to the Canadian government for manufacture by Fleet Aircraft Ltd.

Fairchild Engine & Airplane Corp. simultaneously announced in New York the conclusion of a license agreement with Canada following statement from the Dominion that the Fairchild "Freshman" trainer would be one of seven types to be concentrated on by Canadian manufacturers in 1942 (See story elsewhere).

The Fairchild announcement, however, states that "an undisclosed number of Fairchild 'Cornells' will be built in Canada. This plane is known to the U. S. Army Air Corps as the PT-26.



## THAT'S THE PASSENGER, ON THE RIGHT!

WHEN the palms are being passed out to the pioneers of air transportation, one group is too often overlooked—the pioneer airline passengers.

Discomfort, inconvenience and delay were their regular fare—cheerfully accepted. Despite the high costs, they said "Let's Fly," and dug deep in their pockets.

They shoe-horned their way into the famous Forty-B's. They sat in straight-backed wicker chairs while the sturdy old tri-motored Fords

traveled at a breath-taking 110 miles an hour. They could take it . . . and did!

All had something that urged them to be a part of progress—participants, not content with a side-line role. They deserve the industry's thanks. For they provided the inspiration which has built our nation's present system of air transportation to its high level.

**UNITED**  **AIR LINES**

## No Airport, Planes nor Pilots Yet It's an Aircraft Town



**A**LTHOUGH it has no airport, no planes, no licensed pilots, Bantam, Conn., is an aircraft town. The economic hub of Bantam is Warren McArthur Corp., whose work, with the exception of a few minor contracts already completed for the Navy, consists entirely of the production of aluminum seats for airplanes.

Previous to the defense program, Warren McArthur was engaged mainly in the production of aluminum furniture for office and home use. The work force two years ago was 35; 18 months ago, when the company took on its first defense contract—seats for bombing planes—the force rose to 65. Today, with output confined entirely to aircraft seats, the plant employs just under 350 workers.

Warren McArthur employees are moving to Bantam as fast as accommodations can be found for them.

The story of present-day Bantam is one of the effect of aircraft subcontracts. These contracts are directly responsible for the increase of the area's housing accommodations by approximately one-half.

Photos prepared by the Office of Emergency Management show Bantam's "main stem," Route 25, known locally as Lafayette Blvd. At the bottom of the hill is an electrical appliance plant which has not yet had its share of defense business. Also shown is the workers' parking lot, with the Warren McArthur plant in the background. Most of the workers drive in from surrounding towns. Small illustration shows a former Boston Navy Yard worker doing a subassembly job on one of the bomber seats.



Photos by OEM

### Beech Wages Upped 17% Through Incentive Plan

**MARKING** the first "observable effects" of the efficiency incentive profit-sharing plan of Beech Aircraft Corp. by which workers receive half of total net profits, the corporation on Jan. 27 announced first payments to employees which amount for November and December to an average of 17.89% of the total individual worker's earnings for the two months.

The plan gives wage earners 90% of half of the company's net profits each month, and salaried employees 10%.

### Now on Lend-Lease

All direct Canadian purchases of Cessna Aircraft Co. planes have been completed, according to Harold E. Reed, production manager. Future deliveries from the Wichita plant, he said, will be made through the lend-lease program.

### Not a Stork Derby Just a Douglas Greeting

It's not a stork derby, but nevertheless each child born to an employee of Douglas Aircraft Co. will greet the world with a \$5 Defense Savings Stamp figuratively clutched in its hands.

In case of twins, or other multiple births, each child will receive a \$5 Defense Savings Stamp. A letter accompanying the gift will read: "Dear Little Friend: To celebrate the occasion of your birth, we are presenting you with a \$5 United States Defense Savings Stamp. We welcome you to the Douglas Employees' family and hope that you will have a long and prosperous life."

The plan goes into effect simultaneously at the company's plants in Santa Monica, El Segundo and Long Beach, Cal., and Tulsa, Okla.

### MAA Re-Elects Russell President

**FRANK H. RUSSELL** will continue as president and John A. Sanborn was re-elected general manager of the Manufacturers' Aircraft Association as a result of the group's annual meeting, held in New York late in January. Samuel S. Bradley was re-elected chairman of the board.

The following vice-presidents were elected:

Edgar N. Gott, Consolidated; Robert E. Gross, Lockheed; J. T. Hartson, Glenn L. Martin Co.; J. H. Kindelberger, North American; John M. Rogers, Douglas; William E. Valk, Curtiss-Wright; Eugene E. Wilson, United Aircraft.

James P. Murray of Boeing was made secretary and Clayton J. Brukner of Waco was re-elected treasurer.

The new board of directors for 1942 is as follows:

Samuel S. Bradley, chairman; Clayton J. Brukner, Waco; Charles H. Chatfield, United Aircraft; Frank N. Fleming, Douglas; G. Sumner Ireland, Lockheed; George D. Jones, Glenn L. Martin Co.; James P. Murray, Boeing; Frank H. Russell; Leland R. Taylor, North American; William E. Valk, Curtiss-Wright; H. E. Wehmiller, Consolidated; Ray P. Whitman, Bell.

### Grumman Eyes Garages for 'Dispersal Units'

**A SURVEY** of all garage facilities of 10,000-15,000 sq. ft. within a radius of 10 miles of its plant has been started by Grumman Aircraft Engineering Corp., Bethpage, N. Y., it is reported. The action was taken as a result of restrictions on automobiles and tires which are creating difficulties for commercial garage owners.

First of Grumman's new "dispersal units" is reported to have swung into action late in January when the entire cowl department was moved from the Bethpage factory to a former garage.

## Unusual Growth of Mfg. Centers Seen as Menace

**THE PHENOMENAL** growth of the aircraft industry in southern California, especially in the Los Angeles and San Diego regions is causing grave alarm to banking circles, according to a warning recently issued by the Federal Reserve Bank of San Francisco.

Concentration of industry, says a supplement to the bank's bulletin, is a serious menace to the diversifications of industry upon which the region's prosperity has long been dependent. "The domination of a community," the warning states, "by a single industry is always a potential source of danger, and especially so when that industry is subject to such wide fluctuations in demand as may later be the case in the aircraft manufacturing industry."

"In 1939, no single industry in Los Angeles County, apart from food manufacturing, accounted for as much as 11% of total factory employment."

Dealing with existing conditions in Los Angeles and San Diego, the report says "Aircraft manufacturing is even more important in San Diego than to Los Angeles, accounting for roughly two-thirds of all manufacturing employment."

Seattle aircraft manufacturing employment has followed a similar trend, the report states.

The trend to erect new aircraft plants in the middle west will, to some extent, alter this picture; but, if the plants are located in smaller communities in that region, similar patterns in employment may result.

In the face of this warning San Diego is anticipating the need for employment of about 30,000 more aircraft workers this year.

The city's leading aircraft manufacturers have pledged "their all" to expedite the President's call for 60,000 planes this year, and 125,000 in 1943. San Diego aircraft firms pledged to the program are Consolidated Aircraft Corp., Ryan Aeronautical and Solar Aircraft companies and Rohr Aircraft Corp.

### War Bonds for Tips

**Solar Aircraft Co.** announced the inauguration on Feb. 1 of a suggestion system by which employees may submit ideas and recommendations that may lead to improvement of production or design, reduction of cost, improvement of machinery and equipment, improvement of manufacturing methods, elimination of waste and spoilage, and reduction of accidents and fire hazards.

A list of U. S. Defense Stamp and Bond awards ranging up to a \$100-Defense Bond will be made during each year, with additional awards at frequent intervals.

### Cessna Names Agency

**Cessna Aircraft Co.** of Wichita, Kas., has named Gardner Advertising Company of St. Louis to handle its account, Prentiss Cleaves, advertising director, announced.



# Manufacturing Personalities in the News



FERRIS SMITH, Lockheed's export division manager, and MAJ. NERO MOURA, personal pilot of President Vargas of Brazil, as the latter took delivery on a Lodestar for his chief.



VISITORS TO BELL AIRCRAFT—H. Povey and W. D. Hunter of de Havilland Aircraft of Canada, holding model plane; at left, R. Creighton of Bell; at right, Lester Benson, Bell's works manager, and H. K. Ansingh.



OSBORN



POST



VOSLER



KORVIN-KROUKOVSKY

Edo Aircraft Corp. officials are shown above in new pictures. Earl D. Osborn, president, established Edo in 1925; George B. Post, vice-president of sales, joined the company in 1928; Kenneth D. Vosler, secretary and factory manager, with Edo since its beginning; and Boris V. Korvin-Kroukovsky, chief engineer, also one of the firm's original employees.

## OLE FAHLIN

Fahlin Manufacturing Co.'s president, operating at Columbia, Mo.

## WILLIAM O'NEIL

General Tire & Rubber Co.'s president, has successfully promoted the production of guayule as a domestic source of rubber.



HUGH BENET



## THOMAS BARISH

Engineering & Research Corp.'s propeller department manager, busy on government orders at Riverdale, Md.



## L. W. JOHNSON

Harvill Aircraft Die Casting Corp.'s secretary-treasurer, serving aircraft and parts mfrs. on the West Coast.



DAVID R. DAVIS and MANTA ENGINEERS studying a blueprint at Manta Aircraft Corp. Left to right: John P. Davies, Manta president; Dr. Russell M. Otis, chief research engineer; Davis, vice-president and general manager; William J. Waterhouse, chief engineer; W. H. McLauchlan, chief aerodynamicist.

## T. E. SPRINGER

Douglas Aircraft Co.'s manager at El Segundo Division, now celebrating its 10th anniversary.



CRAWFORD



HERZER



FLETCHER

FRED F. HERZER is Adel Precision Products Corp.'s new vice-president in charge of production. M. B. CRAWFORD is Pump Engineering Service Corp.'s newly appointed field service engineer. WENDELL S. FLETCHER is president and chief engineer of Fletcher Aviation Corp., producer of plastic trainers.



LAMBETH

New North American Aviation vice-presidents are, left to right, Robert A. Lambeth, also treasurer; Raymond H. Rice, in charge of engineering; and J. S. Smithson, in charge of manufacturing.



RICE



SMITHSON



## CHARLES A. ARENS

President, treasurer, and sales manager of Arens Controls Inc., producer of flexible, rigid, tab, and push-pull controls.



## RICHARD H. FROST

Chief engineer of Arens Controls Inc., now manufacturing rotating units for constant speed propellers at Chicago.



## Personnel in the News

**A. F. Flood** has been named assistant general manager of Fairchild Aircraft Division, Hagerstown, Md., serving under General Manager **Richard S. Boutelle**. Flood is also assistant secretary-treasurer of the division.

**Dr. F. G. Roemer** is Republic Aviation Corp.'s new staff physician.



Vought

Rix

Taylor

Thomas

**Glenn A. Stearman**, who in 1927 was closely associated with his brother, **Lloyd**, in the organization of Stearman Aircraft Co., now Boeing Airplane Co.'s Wichita Division, has become associated with **Tom Dillingham** of Enid, Okla., in a firm to produce airplane parts. Stearman previously operated a company at Coffeyville, Kan.

**John R. Hoover** has been appointed manager of synthetic sales of B. F. Goodrich Co. succeeding **Dr. H. E. Fritz**, who was recently named company director of research.

**American Propeller Corp.**, Toledo, O., has announced officers and personnel as follows: **William F. Wise**, president; **R. C. Hicks**, treasurer; **R. G. McKendry**, assistant secretary; **W. H. Eddy**, plant manager; **R. J. Cowden**, contract and service engineer; **W. E. John**, production manager; **D. R. Woolf**, chief engineer; **D. T. Waltz**, purchasing agent; **J. D. Young** personnel manager.

**O. L. Woodson**, vice president and assistant general manager of Bell Aircraft Corp., is the author of "How Airacobras Are Built" which appeared in a recent number of *American Machinist*.

**Robert Boyer Jr.** is in charge of Bell Aircraft Corp.'s new office at 131 N. Ludlow St., Dayton, O., which was opened to expedite the interchange of information with the Air Corps at Wright Field. **Ray Anderson**, Bell's service representative, remains at Wright Field.

**George A. Rix**, formerly chief hydraulics engineer of Hughes Aviation Co., has joined the engineering sales department of Aircraft Accessories Corp.

**Russell R. Vought** has been elected vice president and west coast general manager of United Aircraft Service Corp., a subsidiary of United Aircraft Corp., which functions as the service and installation unit for products of the parent corporation.

**A. E. Shelton** has resigned as president and director of Menasco Manufacturing Co. Company's proxy statement covering the annual stockholders meeting to be held Feb. 17, lists **Van C. Niven**, an associate of the law firm of Gibson, Dunn & Crutcher, as a director nominee to succeed Shelton. All other nominees are present directors.

**David A. Thomas** has been appointed manager of Adel Precision Product Corp.'s Canadian engineering offices, 302 Bay St., Toronto.

**C. G. Taylor**, chairman of the board of Taylorcraft Aviation Corp., Alliance, O., has announced his resignation as consultant on all matters pertaining to the firm's business. He founded Taylor Aircraft Co. in 1938, the organization which later became Piper Aircraft Corp., and established Taylorcraft Aviation Corp. in 1937. Taylor retains his "substantial financial interest" in the corporation.

**Kenneth J. Wilson** of Aircraft Components Inc., now carries the title of contract coordinator for the Van Nuys, Cal., firm, the office of sales manager having been eliminated.

**A. L. Riggs** has succeeded **Hugh R. Perry** as sales manager of Waco Aircraft Co., Troy, O., the latter having been elected director and vice-

president . . . **Robert E. Hoefflin**, Waco's chief accountant, has been elected treasurer.

**H. S. Golden**, assistant chief engineer, Buick Division, General Motors Corp., will present a paper, "Power Setup at the Aviation Plant of Buick Motors," at the annual meeting, April 9-10, of the Midwest Power Conference, Palmer House, Chicago.

**Donald A. Anderson** of Allison Division, General Motors Corp., arrived in Ankara, Turkey, on February 3, having left the U. S. at the request of the Turkish government to instruct Turkish ground crews and technicians in maintenance of that country's fleet of Curtiss-built Tomahawks.

**Nicholas S. Ludington** has been elected a director of National Aviation Corp., succeeding **Duncan H. Read**, resigned. Ludington is also on the board of Jacobs Aircraft Engine Co. and Kellett Autogiro Corp.

**Orlando S. Reimold II** has become personnel supervisor in Wright Aeronautical Corp.'s engineering department at Paterson, N. J. . . . **H. E. Linsley** of Wright Aeronautical is the author of "Automatic Tooling Speeds Production in the New Wright Aero Plant" which appears in the February issue of *Machinery*.

**Carl Apponyi** has been named by Northrop Aircraft Inc. to the post of director of public relations. He will continue to be in charge of stockholder relationships for the company.

**Frederick Castle**, assistant to the president, and **Harris Hull**, assistant to the vice-president of Sperry Gyroscope Co., have been granted leaves of absence to serve with the Army Air Forces.

**Mathias Klein**, manufacturing superintendent at the Indianapolis plant of Curtiss-Wright Corp.'s Propeller Division, has been named chief production engineer of the division. . . . **Edward F. Theis**, formerly with Philco Corp., has joined the Propeller Division as manager of the Indianapolis plant.



Riggs

Hoefflin

Perry

Wilson

**Charles H. Colvin**, founder and former president of Pioneer Instrument Division of Bendix Aviation Corp., has been named co-ordinator of research at New York University College of Engineering.

**Joseph L. McClane** has resigned as vice-president and general manager of Republic Aviation Corp. His future plans were not announced, but he has agreed to make his "time, services, and counsel available to the company for a limited period of time."

**Herbert W. Beh**, auditor, has been appointed to the position of assistant treasurer and assistant-secretary of Hamilton Standard Propellers Division, United Aircraft Corp.

**Lt. Edward T. Simms** and **Jim Gray** have been added to the flight testing crew of North American Aviation Inc. of Texas. Lt. Simms joins the Air Corps flight staff testing North American AT-6As; Gray joins the company staff.

**Chandler-Evans Corp.**, South Meriden, Conn., has announced appointment of **Walter F. Skillin**, for six years with Fafnir Bearing Co., as chief engineer working with **M. E. Chandler**, vice president in charge of engineering . . . Chandler-Evans recently named **William D. Keveney** as controller and chief accounting officer.

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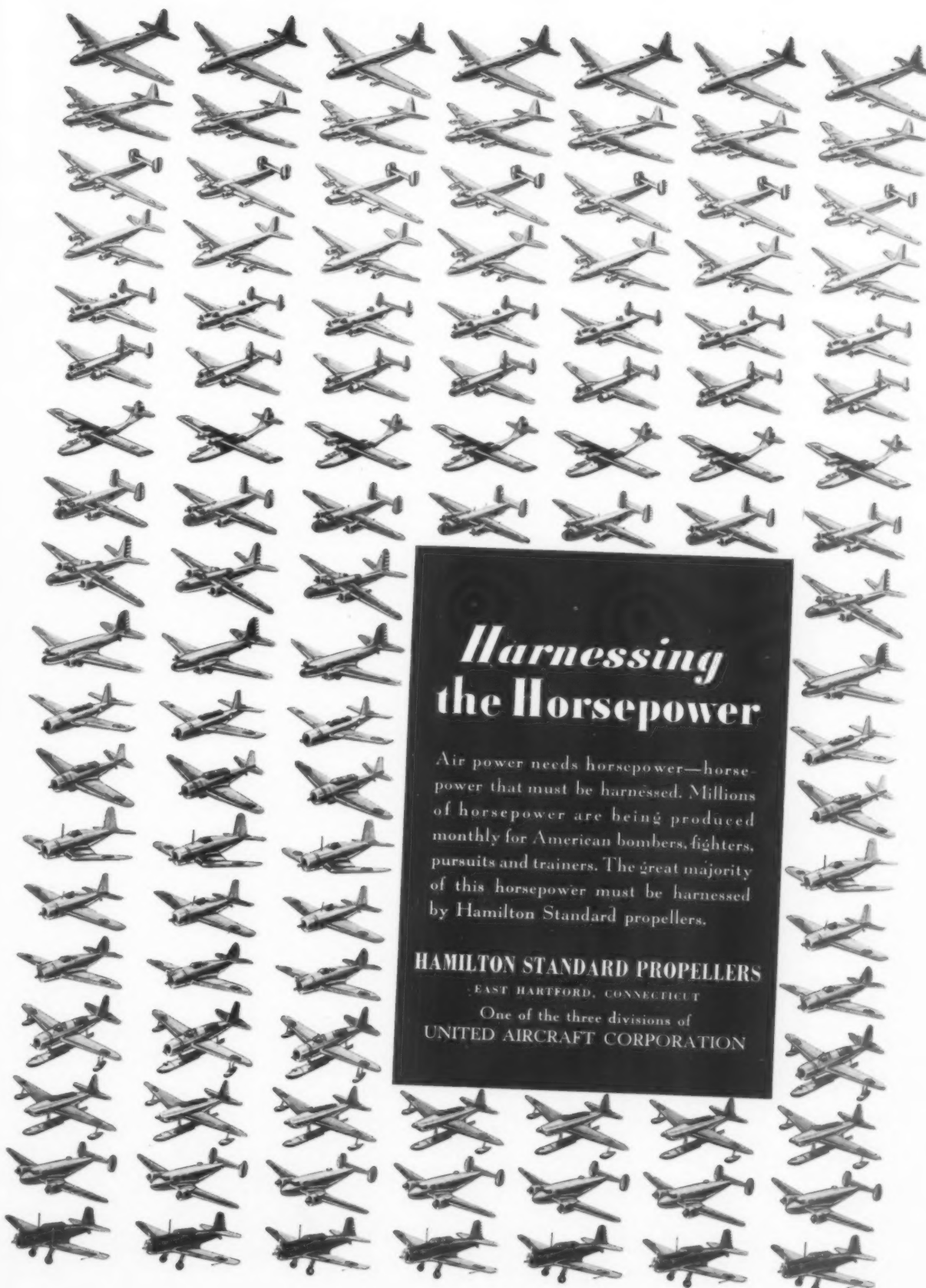
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## *Harnessing the Horsepower*

Air power needs horsepower—horsepower that must be harnessed. Millions of horsepower are being produced monthly for American bombers, fighters, pursuits and trainers. The great majority of this horsepower must be harnessed by Hamilton Standard propellers.

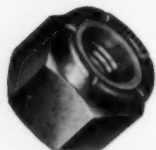
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SELF-LOCKING

### \$73,000 Saved

Cooperation in revising design and tooling recently saved approximately \$73,000 in the estimated cost of production of a group of airplanes by Beech Aircraft Corp., Wichita, Kan., it was announced.

Credit for the saving was given to T. A. Wells, chief engineer; J. W. Wiley, supervisor, manufacturing engineering; W. M. Bashaw, outside production manager; V. W. Brownlee, experimental department, and others.



Seen at Air Force Stations  
Little Hitlers Are Ubiquitous

## Canada Produces 7 Types

(Continued from page 22)

### DeHavilland Aircraft

De Havilland Aircraft of Canada Ltd., Toronto, is working in two 10-hour shifts, manufacturing Tiger Moth elementary trainers and Avro Anson fuselages as well as a secret type referred to above. In December, de Havilland was reported to be preparing production on a twin-engine British fighter, but further details were confidential.

Late last month the company was said to be preparing to turn also to output of Fairchild Freshman primary trainers. Actual production of the Fairchild was not expected until late this year.

In addition to delivering Tiger Moths ahead of schedule, de Havilland has produced a quantity of Menasco-powered Moths which are serving as radio trainers.

Floor area is 400,000 sq. ft.; employment, 2,400.

### Fairchild Aircraft

Fairchild Aircraft Ltd., Longueuil, Que., during the next two years plans to continue all-out production of Bolingbroke Bombers, original order having called for 169 units. Production through 1941 was as follows: Jan., none; Feb. 3; Mar., 6; Apr., 10; May, 12; June, July, Aug., Sept., 15 each month.

A total of 160 sets of Hampden aircraft components were ordered from Fairchild recently by Canadian Associated Aircraft.

Employment totals 4,300, against 3,500 on June 30, 1941, and 1,600 on July 1, 1940. Weekly payroll is \$131,715.

### Federal Aircraft

Federal Aircraft Ltd. was established in 1940 as a completely government-owned organization to supervise production of the Avro Anson, a twin-engine, low-wing monoplane designed for reconnaissance and training.

By the end of 1942, Federal Aircraft expects to have supervised the production of well over 1,000 planes with replacements and spares varying from 10 to 50%.

### National Steel Car

National Steel Car Corp. Ltd., Hamilton, Ont., is expected to manufacture its share of the \$75,000,000 Lancaster bomber contract at its new Malton, Ont., plant. Co-operating with Canadian Car & Foundry on the order, National Steel Car has already started to transform tools and jigs intended for use in construction of the Martin B-26 to make way for the Lancasters. A \$27,500,000 order for 200 B-26s was canceled late last year.

Commenting on the Lancaster undertaking, the *Financial Post* had earlier declared that "some are wondering if there is not something wrong with the planning which can so readily switch an airplane factory from one line of production to an-

other. Work on tooling, redesigning and expanding the Malton factory of National Steel Car Corp. to handle the Martin B-26 is under way and was to have been completed by Feb. 1942. Now that expensive program is scrapped and another started, and it will be late in 1942 before the plant can get into production."

It was explained by C. D. Howe, Canadian minister of munitions and supply, that the Lancaster project is being undertaken at the request of the British government and that the B-26s will now be obtained from the U. S.

National Steel Car's Malton plant is expected to jump its payroll in 1942 from 3,300 to 8,000. Floor space is being more than doubled, from 350,000 to 750,000 sq. ft.

### Fleet Aircraft

Fleet Aircraft Ltd., Ft. Erie, Ont., has been building fuselages for the Handley-Page Hampden, having a total order of 80 units, in addition to the Fleet 16 trainer.

Production is now getting underway on an order for 200 Fleet 60s. It is reported that following delivery of the first production model of the 60 a number of small modifications required by the RCAF delayed output temporarily but steadily increasing deliveries are now expected and the rate of one per day is the goal for the near future.

Fleet has built 500 16s. In 18 months prior to the war, the company produced 39 craft; in 18 months following the war, 452 were built, 183 assembled.

Fleet's next assignment will be manufacture under license of the Fairchild M-62 elementary trainer.

Firm's floor area totals 160,000 sq. ft.; employment, 1,830.

### Noorduyn Aviation

Noorduyn Aviation Ltd., Montreal, holds orders for 1,010 Harvards with an addition of about 20% in spare parts. Orders for the Norseman type amount to 75 units. Average Harvard output during 1941 was 10 per month, although company produced 20 in September and now looks forward to a projected rate of 50 per month.

Floor area is 225,000 sq. ft.; employment, 3,200.

### Ottawa Car

Ottawa Car and Aircraft Ltd., Ottawa, Ont., which two years ago employed 200 workers, largely in the manufacture of street cars, is now turning out "millions of parts" for aircraft and has a total employment of 2,000 employees; floor area, 250,000 sq. ft.

Before the year's end, company expects to fill orders for parts entering into the assembly of 160 Hampden bombers, together with 100 wings and assembly for Avro Ansons. Under present orders, production of Hurricane parts will extend into the spring. Backlog is reported as being about \$3,000,000.

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Individual Specifications

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Twenty-five Years Experience in  
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**CRESCENT PANEL CO**

Louisville, Kentucky

**INDIANA VENEER & PANEL CO.**

New Albany, Indiana

## Kwik-Klip is Added to Bendix Clamp Line

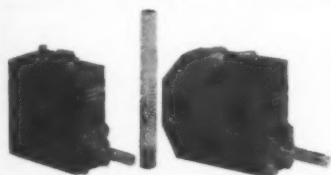
KWIK-KLIP, a new fastening device designed to save labor on wiring, conduit and tubing installations, has been added by Bendix Aviation Ltd., North Hollywood, Cal., to its line of cushion and bare clamps.

The product is constructed as a half loop and merely fits over the wire or conduit—not bolted around it.

Kwik-Klips are supplied with or without Speed Nuts and with or without Neoprene cushion. The cushion is permanently bonded to the clamp with the Bendix Thermo-Weld process, and does away with need for wrapping wire or conduit with tape for protection at the point where clamp is applied. Range in size is from 1/8 to 1 1/4 inch.

## Lightness is Feature of 4-Way Selector Valve

LATEST TYPE 4-Way Hydraulic Selector Valve to be introduced, the Mighty Midget, shown in photo in comparison to King Size cigarette,



illustrates modern design trends in two widely separated industries, according to announcement from Adel Precision Products Corp., Burbank, Cal.

Utilizing identical component operating parts the two designs shown differ only in porting arrangement, the smaller unit being adapted to multiple assemblies and manifolding, the larger unit for individual installations with outlet ports independent of additional assemblies.

With ample capacity for landing gear actuation of typical bi-motored aircraft, the smaller of these assemblies weighs but eight ounces, the larger only 11, representing savings of 83 and 76% in weight as compared to predecessor units.

Bodies are fabricated from dural bar stock, thus permitting operating pressures up to 3,000 p.s.i. with ample safety factor for momentary overload in excess of these values.

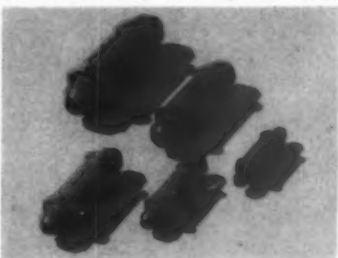
## Taylorcraft Awarded New Type Certificate

Taylorcraft Aviation Corp., Alliance, O., has been awarded new aircraft type certificate No. 746 by the CAA aircraft engineering division for two-place closed land monoplane Models DC-65, DF-65 and DL-65. The models are essentially the same, except for engine installations as follows: DC-65 powered by Continental A-65-8; DF-65 powered by Franklin 4AC-176-B2, and DL-65 powered by Lycoming O-145-B2.

## Bendix Check Valve Uses Plastic Poppet

WIDESPREAD installation on Air Corps and Navy planes of its new check valve is reported by Bendix Aviation Ltd., Burbank, Cal., following recent introduction of the development.

The valves allow hydraulic fluid to flow in one direction but provide a positive seal against flow in the opposite direction, and are comprised of only four parts—body,



plastic poppet, spring, and connector.

Through the use of the plastic poppet no inserted seats are used inasmuch as the poppet seats are directly in the aluminum alloy valve body.

"The extremely long life of this type of construction has been demonstrated by life tests of over half a million cycles and by actual experience on other similar units during three years flying experience," the announcement states.

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Protecto-Ray Bathrooms! It's mentioned wherever seasoned travelers discuss present day hotel service. You'll find Protecto-Ray Bathrooms (rendered absolutely sanitary by special portable ultra-violet ray equipment!) only at New York's great Hotel New Yorker. After being treated, each bathroom is sealed to keep it in that sanitary state for your personal use! Yet this expensive service costs you nothing extra!



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► American Aviation Associates, Inc. performs a vital service for all branches of the aviation industry. And we are justly proud of our recognition by Associated Business Papers, Inc. . . . a vital force in the publishing industry and an essential organization for the continued effectiveness of all business papers. Only one other publication wholly devoted to aviation is an ABP member.

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► Devoted to a factual, uncolored presentation of the news, American Aviation enjoys the leading position for fast, concise reporting of all events affecting the aviation industry.

► American Aviation Associates, Inc. will continue to serve the Aviation industry with the same spirit of honesty and freedom that has brought it recognition as "the independent voice of American Aeronautics".



The people of the world may not vote together nor read together nor celebrate holidays together *but they must eat together!* If some don't get to the table as often or as early as others or if they are shouldered away by bullies, there is no peace—not even for the strong.

Air transportation is a very real means of helping adjust and balance the world's economic needs because it puts every nation at the threshold of every other nation. Trade and commerce is not the slow, difficult practice of our forefathers but quick, efficient, business-like interchange which leaves no nation long in the darkness and backwash of isolation.

Air transportation sets the nations of the world shopping at each other's counters at a rate which leaves none of them idle or hungry for long.

**AMERICAN AIRLINES** *Inc.*  
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# House Committee Resurrects 'Subsidy' Issue, Demands Quick Mail Rate Slashes by CAB

## Airlines Dispute \$4,000,000 Loss Shown by P. O.

By ERIC BRAMLEY

THE CIVIL Aeronautics Board should give close attention to domestic air mail rates "looking toward reduction at the earliest practicable date," the House Appropriations Committee stated on Feb. 2.

Although recommending that the Post Office Dept. receive \$24,588,115 for air mail in fiscal 1943, an increase of \$2,635,064 over 1942, committee members nevertheless raised the old question of air mail "subsidy" and claimed that some airlines were making "unconscionable profits."

Industry and neutral sources immediately refuted these charges, claiming that the airlines are far from overpaid for carrying the mail. In fiscal 1941, they pointed out, the P. O. realized a profit from air mail of \$453,841 after all direct charges had been paid.

Committee members were told by the P. O. that domestic air mail, according to cost ascertainment calculations, is about \$4,000,000 in the red. Many industry officials scoff at the cost ascertainment procedure.

"During the hearings, the committee discussed at length with officials of the Post Office Dept. the matter of rates being paid for transportation of domestic air mail," the committee report on P. O. appropriations said. "From the testimony it appears that there has been little revision of rates which were originally fixed on a subsidy basis as provided by law.

### Not Proper Charge

"As stated by the Second Assistant Postmaster General, the rate does not represent a proper charge for carrying the mail but is the difference between approved operating expense and revenues from other sources. In other words, there is no relation between the cost of carrying the mail and the rate. The air mail rate is a vehicle for providing a subsidy to a new and nationally important industry.

"Without in any sense criticizing this system the committee desires to express the view that close attention should be given to these rates looking toward reduction at the earliest practicable date.

"Payment of a subsidy in order to assist the industry in development is justifiable but that subsidy should be reduced as soon as companies reach the point where aid is no longer justifiable."



**Reshuffled CAB:** This exclusive picture shows the Civil Aeronautics Board following the recent reshuffle. Left to right: Oswald Ryan; George P.

Baker, vice chairman; L. Welch Pogue, chairman; Harlee Branch, former chairman, and Edward P. Warner, former vice chairman.

The report claimed that between 1935 and 1941 airline passenger revenues increased 500% and that express revenues, although in much smaller total amount, increased at about the same rate.

"Immediate restudy of the rate structure and probably extensive revision are indicated by these facts and it appears desirable that the Civil Aeronautics Board should give immediate attention to the problem."

### Predict Profit

In hearings before the subcommittee of the House Appropriations Committee, Second Assistant Postmaster General Smith Purdum and Air Mail Superintendent Roy Martin expressed the opinion that within a year the air mail service will be in the black, even under cost ascertainment methods. "We have a very favorable story to tell this time," Martin asserted.

When informed that under cost ascertainment methods, domestic air mail is now \$4,000,000 in the red, Chairman Louis Ludlow (D., Ind.) asked: "Do you see a time of increasing revenues when that might be wiped out and when we might be in the black entirely?" Martin answered: "I would predict that might occur by the end of this year, if present increases continue . . ."

Despite this probability, Purdum told the committee that " . . . we do feel that on some lines there should be a reduction made in the rates by the . . . Board at the earliest practicable date."

### Asks 'Pressure'

Rep. Frank B. Keefe (R., Wis.) replying to Purdum, said: "I want to say that I share that interest . . . Even though the postal revenues may ultimately wipe out that de-

ficit, that still does not mean that we should not look at the question as to whether or not these airline companies are not gouging those revenues in an unwarranted manner through excess profits earned through their operations as a result of the rates established by the CAB . . ."

"And we have a very definite obligation to insist that some pressure in some way be applied to the CAB to make suitable investigation to see to it that in those cases where unconscionable profits are being realized by the airline companies either the general public through the reduction of the air mail rates or the Treasury of the United States shall receive that benefit rather than the companies themselves . . . I assume you are in accord with me on that?"

### New Rates Wanted

Purdum answered: "Yes sir . . . Only a few days ago, when every member of the . . . Board, with the exception of Mr. Branch . . . was in my office . . . I asked those gentlemen to please give us some new rates on some of the big airlines . . . Those gentlemen told us that they would endeavor to issue new rate orders as soon as possible. And, in all fairness to . . . the . . . Board, it is a fact that an analysis of the operations of the larger carriers and a thorough investigation of their financial status is a tremendous undertaking that undoubtedly requires considerable time."

Several times during the hearing Representatives Keefe and Emmet O'Neal (D., Ky.), who did most of the questioning on CAB referred to the entire \$24,000,000 air mail appropriation as "subsidy." They were corrected by the P. O. officials and Chairman Ludlow.

Industry spokesmen expressed the opinion that the Congressmen's comments presented a one-sided view, not based on all the facts. Instead of there being a subsidy, they claim that the P. O. in recent years has made far larger profits from air mail than ever show up in year-end summaries, and add that many P. O. costs attributed to air mail are not proper.

It was pointed out that as far back as 1938 the entire question of subsidy and the adequacy of cost ascertainment was dealt with by the Interstate Commerce Commission. After exhaustive analysis, ICC Examiner Louis Inwood in Air Mail Docket 19 concluded that under a more accurate method of computation P. O. revenue exceeded payment to the carriers—at a time when the P. O. was claiming that payments were \$2,000,000 over revenues. Inwood also pointed out that cost ascertainment was subject to many errors. His report has never been refuted by the P. O.

Whether or not the House committee's observations will have any effect on CAB's action remains to be seen. The Board has just released the Delta rate case—granting the company an increase—and is working on the all-important American case, in which a substantial decrease has been recommended.

### New S. A. Line Seen

A new South American airline, operated by Argentina and Brazil with equipment of the former German line Condor, may be organized, according to South American press reports.

The newspaper *La Prensa* stated recently that an operations agreement had been worked out by the two nations at Rio de Janeiro.

# Mass Cargo Flights Urged as War Aid

## Loening, Graddick Discuss Future of Air Freight

**D**ESPITE continued emphasis on production of combat aircraft, the importance of air cargo development in both war and peace was stressed again last fortnight by two leading exponents of this form of transportation.

Pointing out that the U. S. is engaged in a war on a world-wide front, Grover Loening, noted air cargo expert, stated that transoceanic transportation of materials and men by air can contribute immeasurably toward victory.

Speaking of the future, Charles P. Graddick, director of mail and express for United Air Lines, predicted operation of large cargo ships on transcontinental schedules and between large centers of population. Over the period of a year, 12 planes such as the Douglas B-19 or the Martin "Mars" could deliver, from New York to the Red Sea area, as much cargo as the average 10,000-ton steamer, Loening told the Municipal Bond Club of New York City.

Such a steamer, he explained, is doing well if it nets a cargo capacity of 6,000 tons after being equipped with armament, fuel, food, etc. The 12,000-mile trip to the Red Sea is made at 10 mph., so that with delays due to convoy assembly, detours, etc., a round trip actually consumes 140 to 150 days; he said.

"The freighter will do well under present war conditions to make two complete round trips on this long route in a year," he added. "This means that it will deliver to the Red Sea region 12,000 tons of cargo—a sizeable amount, nevertheless."

A plane such as the B-19 or the "Mars" would be able to carry about 20 tons of cargo, the speaker asserted, adding that a trip to the shoulder of Africa at Dakar or Bathurst could be made in 20 hrs.

### 50 Trips a Year

"Without delaying over a few hours, the flying ship would proceed another 20 hrs. across Africa to the Red Sea, arriving there in less than two days. Then with a day or so lay-over and a day or so delay due to weather, we can safely say that a plane of this sort could make a round trip in a week every week or 50 round trips a year, which would be about 4,000 flying hours a year.

"Well, then, 50 trips carrying 20 tons each means that this one plane delivers 1,000 tons in the fastest possible way from the eastern seaboard to the Red Sea, Eritrea, Suez, or wherever it is needed.

"In other words, only 12 of these . . . planes . . . will carry

much the same amount of cargo as one large freighter in a year.

Loening recalled that in 1937 the Maritime Commission had \$300,000,000 that Congress had voted to it for development of the merchant marine, and that Chairman Joseph P. Kennedy had indicated that he favored placing a substantial portion of the money into development of the "merchant marine of the air."

### Few Clippers Built

"Also, at that time, Nov. 1937—well over four years ago—the then existing constructors of clipper flying boats numbered five in the U. S. and only one of them, Boeing, had any orders. The other four, Martin, Sikorsky, Consolidated and Douglas, were idle and looking for work to do.

"A combination of oppositions that I need not dwell on, as well as a total lack of appreciation of this recommendation, resulted in its being flatly turned down by Congress and as a result when the war started a couple of years later, the meager U. S. merchant marine of the air consisted of only eight long-range clippers—six Boeings and two old Martins with only three additional ones under construction.

"As a matter of fact, had the Maritime Commission's recommendations been adopted and the additional facilities used, we could have had well over 100 such planes in service by that time. And might not that have meant saving Wake Island?"

The Germans used transport planes continuously in the invasions of Norway and Crete, Loening pointed out. The invasion of Norway "marked the eclipse of British sea power and the elimination of Adm. Mahan's doctrine from the correct fundamental concept of war," he said. "What was on the sea, no matter how preponderant, made no difference."

### Praises Gliders

At Crete, the Germans used gliders, Loening noted, adding that gliders are "the efficient freight cars of the air."

After the war, "our honeymoon of disregarding cost-per-ton-mile

will be over," the speaker said. "In war our duty is to get the goods there; in peace our duty is to get them there at the cheapest rate.

"Obviously, aircraft will suffer severely on this score. At the present time our shorter range planes can carry cargo loads at a direct cost of 5c to 8c a ton-mile. When we add to that the use of gliders, the cost will come down to as low as 3c a ton-mile, which is about the cost of motor truck transportation or of fast freight, but is still very much above the ton-mile cost of shipping.

"But then another thing is happening to alter this picture, and this is a curious paradox. The very war that we are fighting to preserve our world, to preserve international trade as we know it, is going to kill that trade for the simple reason that the war is making each continent self-sufficient . . . Transoceanic cargo carrying, as far as the U. S. is concerned, will be largely in passengers and specialties. And for these we can afford the higher cost of the efficiently quick air delivery of goods and persons."

### Graddick Eyes Outlook

Graddick, speaking before the Institute of the Aeronautical Sciences, said that air cargo in the U. S. is "in a state of infancy." Whatever may be said concerning the slowness of air cargo development by U. S. airlines "the fact remains that they are faced with competition from the finest surface transportation system in the world, both by rail and by motor trucks," he pointed out, adding that future development will have to take this competition into consideration.

Formation of Air Cargo Inc. by the major airlines is "a healthy sign," the speaker asserted. "What is most encouraging is the indication that airline officials will take the private business initiative to carry on and expand, and that government control will not be required."

Present airport facilities at some major cities "are entirely inadequate" even for present-day traffic and schedules, he said. "In the selection of future airports great care should be exercised to see

that they are located with due regard to railroad and trunk highway facilities.

### Sees Cargo Airports

"It is entirely possible that some of the larger cities exclusive cargo airports will be constructed."

Warehouses will be needed for temporary storage of goods awaiting transfer from one route to another, he pointed out. They will also be needed when loads from several local trips are being consolidated for loading on a through flight. "Commodity rates, especially those which may provide for movement on a space available basis, but within a given period, will necessitate a provision for warehouse storage space . . . Inasmuch as the weight to be flown will definitely affect economy of operation and the rate which the public will pay, it will be desirable that loading facilities be kept on the ground instead of being built into the plane."

Feeder routes, which will play an important part, may (1) be operated by the trunk lines, or (2) be independent, Graddick said, adding that "undoubtedly the public would receive better service if a single carrier could operate both the feeder and trunk line service of its own system, controlling and coordinating schedules accordingly. The cost of ground facilities . . . would be less as would be the cost of operation and maintenance."

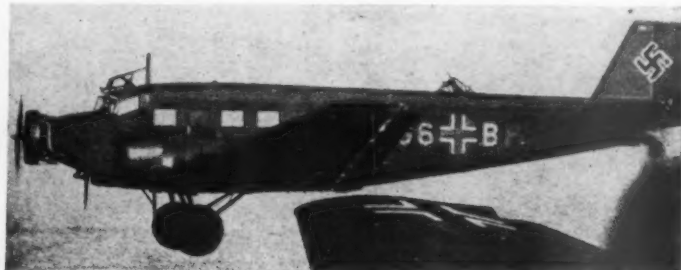
### Low Rates Needed

Present air express rates are four to seven times rail express rates, he stated. "The ton-mile operating costs of cargo planes will have to be low enough that rates may be established sufficiently near surface rates . . . Surveys which have been made indicate that even though air express rates be two or three times rail express they will still produce considerable tonnage. Furthermore, there is every indication that planes can be built and operations conducted which will . . . allow . . . rates even lower than that, and the airlines can confidently look to the future with optimism."

An "open mind" should be kept on the subject of cargo gliders, Graddick urged.

Railway Express Agency is rendering "an excellent public service" through its pick-up and delivery system, and only the Post Office Dept. could give as complete coverage, he said. Pick-up and delivery is important and the airlines "must always be prepared to meet the situation even to the extent of setting up the service themselves if satisfactory service cannot be given by others."

Graddick concluded that "notwithstanding the somewhat limited scale of present cargo operations most of the major airlines now have the nucleus of men, material and experience with which to expand quickly. The expansion is rapidly taking place now and will be accelerated greatly when more planes become available."



Aeroplane photo

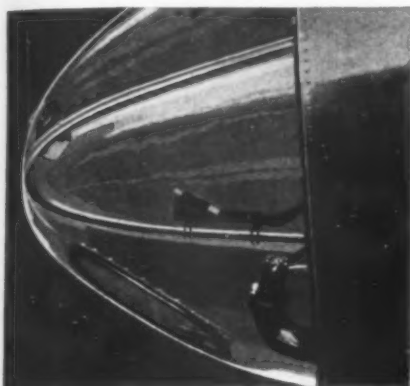
Famous Flying Wagon—Junkers 52—Veteran of Balkans, Crete

U. S. Can Build 'Em Better, Cargo Proponents Say

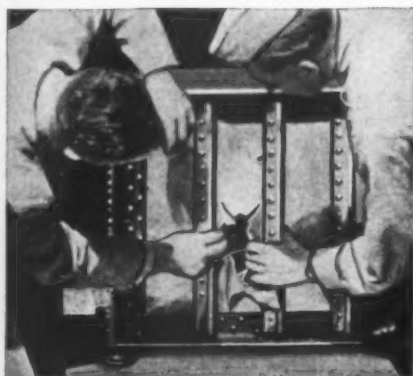




**Robot Draughtsmen** were Martin's solution when expansion made a shortage of engineers inevitable. Now Martin's giant photo-layout method reproduces drawings in full scale directly on sheet metal, eliminates layout time, makes available hundreds of engineers for more important work.



**Plastic Pioneering Paid Off**—when aluminum became critically scarce in 1940. Winner of the 1940-41 Modern Plastics Award, Martin now uses plastics in place of aluminum for 400 different aircraft parts. Pictured is the business end of a Martin B-26—made of tough, light-weight plastic.



**A 1940 General Arnold "Must"**—self-sealing fuel tanks. Martin—with the Mareng self-sealing tank—was first to answer. Riddled by machine gun fire, the Mareng tank remains leak-proof—is now standard equipment on many American warplanes.

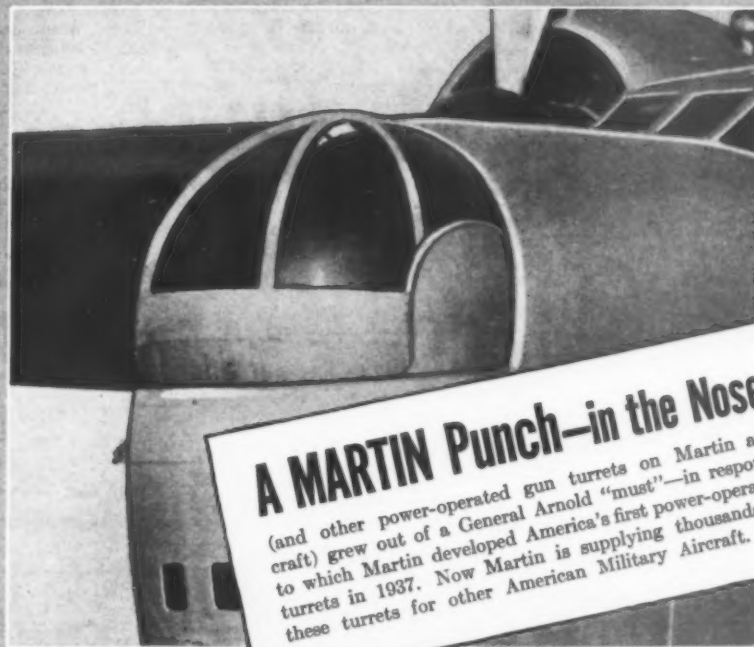


**Iron Fingers Supplant Hands** in sorting the thousands of rivets swept up from Martin floors each day. This rivet sorter is just one of scores of minor labor-saving devices developed by Martin—to save precious man hours that will help reduce the duration of war.

# Now MARTIN Developments used throughout Industry pay War Dividends

**M**ADE available to all industry, many Martin developments now are speeding America's war output, improving America's military materiel. A few of these developments are pictured here. Some are still cloaked in secrecy. Hundreds of others, individually minor but collectively important, are making a major contribution to America's war effort. Meanwhile, throughout the Martin organization, more developments are afoot—to add new might to tomorrow's aircraft, new efficiency to tomorrow's production methods.

THE GLENN L. MARTIN CO., BALTIMORE, MD., U. S. A.



## A MARTIN Punch—in the Nose

(and other power-operated gun turrets on Martin aircraft) grew out of a General Arnold "must"—in response to which Martin developed America's first power-operated turrets in 1937. Now Martin is supplying thousands of these turrets for other American Military Aircraft.

# Martin

## AIRCRAFT

Builders of Dependable



Aircraft Since 1909



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# Voices for Victory!

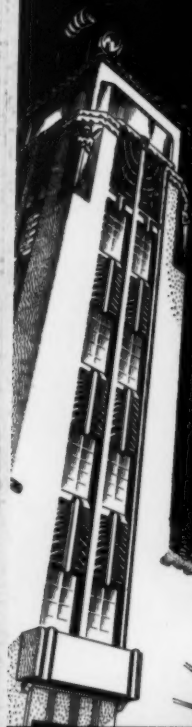
FIGHTERS, BOMBERS, TRAINERS—rolling off the assembly lines — all must have radio command sets, without which coordinated, victorious war in the air would be impossible.

Much of this equipment is being made by Western Electric. We're proud that our 25 years' experience in aviation radio enables us to turn out these Voices for Victory in ever increasing quantities — to help "Keep 'em Flying!"



# Western Electric

# Craftsmen



CURTIS-WRIGHT TECHNICAL INSTITUTE

HIS TOWER OVERLOOKS AVIATION'S MOST DISTINGUISHED SCHOOL OF AERONAUTICS • FOUNDED IN 1929

The great responsibility of the aircraft industry in America's war effort has been universally recognized, and probably the most important single unit in aviation is the skilled aircraftman. When aviation executives have had to accept single-phase training from short, "quickie" courses, they can entrust vital emergency positions only to men who have been thoroughly trained to build responsibility assigned to them. The value of such men is governed by two factors: his intelligent sincerity in handling aviation as his life work, and the ability and experience of those who train him in that career. Curtiss-Wright Technical Institute, under the personal supervision of Major C. C. Hawley, President since its inception, and sole owner, is America's most distinguished school specializing in the training of Aeronautical Engineers and Master Aviation Mechanics. Its standing in the industry is attested by its selection by Donald W. Douglas, President of the Douglas Aircraft Company, as the school for



**CURTIS-WRIGHT  
TECHNICAL INSTITUTE**

GRAND CENTRAL AIR TERMINAL  
GLENDALE (LOS ANGELES) CALIF.

CONTRACTORS TO THE  
U. S. Army Air Corps

his own son's training. His accumulated experience of 18 years in technical aeronautical instruction supplies the aviation industry with graduates thoroughly trained as experienced personnel and is now being utilized in the National Defense Program by the U. S. Army Air Corps in the training of hundreds of enlisted men as Air Corps Mechanics, and its associated organizations, Cal-Aero, Mira Loma and Polaris Flight Academies, are extending primary and basic training to Flying Cadets of the U. S. Army Air Corps and the Royal Air Force. With a proved and tested curriculum and unsurpassed faculty of practical engineers and technicians, we take great pride in filling the industry's call for men "trained to precise order" . . . the career men on whom aviation's future depends. Curtiss-Wright Tec is now training approximately 1,800 students, of whom approximately 500 are Army enlisted men, and is prepared to expand to accommodate 5,000 students if required by America's war effort.

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## American Presses Petition for Route to Mexico City

IN ORAL argument before the Civil Aeronautics Board on Jan. 30 American Airlines urged that its application for a route from El Paso and Ft. Worth to Mexico City be granted, despite the protests of three interveners.

Hamilton O. Hale, attorney for AA, told the Board that AA is the only company that can render international service over the route. AA now has a permit from the Mexican government and is ready to go at a moment's notice, he said.

The attitude of Pan American Airways, one of the interveners, is: "You shall not cross the border," Hale stated, adding that PAA is interested only in where American might go from Mexico City and is not interested in the service which would be rendered to the public. PAA has increased its schedules since the American application was filed, he claimed.

Noting that a route has been recommended for Braniff from San Antonio to Laredo, Hale pointed out that a passenger would still be required to cross the border to Nuevo Laredo to board Cia Mexicana de Aviacion, PAA subsidiary. CMA recently opened a route from Nuevo Laredo to Mexico City.

### Army Wants Line

Appearing for the War Dept., Maj. C. F. Woolley told CAB that the Army's previous statements on the application "remain unchanged." The War Dept. on Jan. 3 had stated that early completion of the proposed airway "and inauguration of service by one or more U. S. carriers is considered of vital importance and therefore recommended by the War Dept."

Maj. Woolley pointed out that Pan American has submitted plans for construction of an airway over the same route as AA and that the PAA facilities "in all respects conform to War Dept. requirements."

He summed up the Army's position by stating "(a) that a suitable inland route provided with adequate equipment for day and night flying is of great importance in our national defense effort; (b) that the War Dept. considers the selection of civil corporate agency or agencies to provide such facilities to be the function of the CAB in disposing of this docket, and (c) that early completion of the contemplated facilities is an element of much importance. Considerable time has already passed."

### Braniff Opposes

Hubert Schneider, attorney for Braniff, argued that now that an inland airway will be furnished by PAA, the national defense character of the AA application is "moot." AA would merely be furnishing a "duplicating service" which would cost the government more than half a million dollars a year, he claimed. By granting Braniff the San Antonio-Laredo route, CAB can accomplish the same purpose at much less cost, he added.



**Busy Man:** The war increased the already widespread activities of Charles H. Babb, famous international aircraft broker. He is seen here on one of his frequent trips to Washington. Stewardess is Miss E. Allison of American Airlines.

If AA's application is granted, Braniff will be paralleled from Chicago to the Mexican border, Schneider said, adding that his company would be fortunate to keep 30% of its present business. "The entire future of Braniff as an independent air carrier . . . is seriously jeopardized. . .," he said.

Smythe Gambrell, Eastern Air Lines' counsel, asserted that EAL's entire New York-Brownsville route would be seriously threatened. He characterized the AA proposal as "useless duplication and wasteful diversion . . ."

PAA has the organization "ready to go" on construction of the airway, according to Henry J. Friendly, PAA attorney. He pointed out that the PAA airway would extend beyond Mexico City to Tapachula and the Canal Zone, thus rendering a greater contribution to national defense.

EAL and Braniff have not complained about PAA's service, Friendly said, pointing to this as proof that the PAA service is not inadequate.

If AA's application is granted, Friendly said he looked for other domestic airlines to seek entrance into the foreign field.

Joseph Paul, public counsel, took no position as to whether or not the application should be granted. He said, however, that the record would not support a finding that existing air transportation between the U. S. and Mexico is inadequate.

### Nichols Group Continues

The House Select Committee to Investigate Air Accidents, headed by Rep. Jack Nichols (D., Okla.) has been authorized by unanimous consent of the House to extend its work through 1942. The committee will receive a minimum of \$10,000 additional.

## 3 Out of 5 Chose the Airlines

THREE PEOPLE out of five chose the airlines when asked to name the nation's most progressive agency of transportation, in a poll conducted by Opinion Research Corp. for the Association of American Railroads. OPR was retained by AAR last summer to make a survey by a scientific sampling process on various aspects of railroad transportation, according to a recent issue of *Railway Age*.

"Less than one out of five persons picked the railroads, and the trucks were the favorites of an equally small proportion," the publication said.

About 68% of those queried expressed the belief that railroads were more important to the defense program than either trucks or barges, "but 46%, when asked which part of the transportation industry had done its defense job the best, answered, 'airplanes.' Twenty per cent chose the railroads, 19% shipbuilding, 12% automobiles and the trucks came last with 6%."

## Board Increases Delta's Mail Pay \$300,000 Yearly

CAB on Jan. 30 awarded Delta Air Corp. air mail pay of 24c per mile on its routes 24, Charleston-Ft. Worth, Augusta-Savannah, and 54, Cincinnati-Atlanta.

The new rate is expected by CAB to increase Delta's total mail compensation by approximately \$300,000 a year. However, over 75% of this increase will result from operations on the Atlanta-Cincinnati and Augusta-Savannah routes for which no previous rates had been established.

Delta also received retroactive increases as follows: for AM24 between Dec. 1, 1939, and July 14, 1941, 31c per pay-mail mile; beginning July 15, 1941, and terminating Feb. 10, 1942, 36c on AM24 and 54. The 24c rate became effective Feb. 10.

The company formerly received a base rate of 29c. Although the new rate is lower in cents-per-mile, more schedules and mileage is involved thus increasing total compensation.

### Reaffirms Policy

In granting the retroactive increases, CAB reaffirmed its opinion in the recent Chicago & Southern case which established the precedent that an airline should be compensated, through mail pay, for operation of a new route prior to the inauguration of mail service. Thus Delta was paid for AM54 from Apr. 15, 1941, when passenger-express service opened, until July 15, when mail was first carried. The same applied to Augusta-Savannah from May 1 to July 15.

The Post Office Dept. had opposed this policy, taking the position that payment should start from the date mail was first carried.

In setting a 24c rate, CAB estimated Delta's operating results for next year as follows: direct flying expense, \$949,500; passenger service, \$90,000; indirect flying, \$450,000; traffic and advertising, \$168,000, and general and administrative, \$120,000. Non-mail revenue was estimated at \$1,133,800 from passengers, \$13,400

express, \$10,100 excess baggage and \$2,000 incidental.

CAB pointed out that "in prior opinions we have taken into account, in establishing a mail rate, the amount of investment employed in the business."

"We have, however, recognized the potentially sterilizing effect of any policy of establishing mail rates as calculated to give a uniform rate of return to all carriers, regardless of the degree of their success in building commercial revenues, in keeping costs down and utilizing their equipment and facilities to a maximum advantage; and we have reiterated the desirability, in the public interest, of including a consideration of incentive to vigorous and enterprising management."

### Includes Incentive

"The inclusion of such incentive entails, among other things, a consideration of the efficiency with which the capital is employed, as measured in part by the relation between the investment and the volume of public service produced. Furthermore, the determination of a fair rate necessarily includes consideration of the susceptibility of the industry to large and unpredictable fluctuations of net operating income."

"Giving due weight to these factors, we conclude that a proper net operating income allowance to the carrier to be assumed in determining a future rate of compensation for the carriage of mail . . . will be approximately 3.7c per mile when related to the total airport-to-airport mileage. Such a figure will allow the carrier 7.5% upon its investment (after federal income tax estimated at 31%)."

"Also we can reasonably anticipate that in the immediate future, approximately 65% of the carrier's operating expenses will be covered by non-mail revenues; that the net operating income anticipated herein will amount (after federal income taxes) to approximately 6.7% of the anticipated non-mail revenue."



## Wings to Victory

Our widespread military and naval bases . . . our growing number of war material factories . . . all are joined in one determination . . . VICTORY! All, too, are joined in an indispensable way by the nation's airlines . . . closely linking manufacturing and military efforts into one determined, impregnable front . . . a front where every minute gained is a victory won.



Add wings to your efforts in doing your part. As an example of the hours and days saved when you travel TWA, New York is little more than 15 hours away from Los Angeles; only 3 hours, 33 minutes from Chicago. And there are equally fast schedules between other important points.

Transcontinental & Western Air, Inc.  
10 Richards Road, Kansas City, Missouri



**'War Time':** George Moor, American Airlines ticket agent, switches over to daylight savings time, or "war time," as President Roosevelt has named it. Passenger Ann Smith looks on. American leaves no doubt as to which time it is using, by including "war time" in its counter sign. U. S. airlines switched over to the new time with little disruption of schedules. Arrivals and departures for the most part were not moved up an hour, as was the case under seasonal daylight time. Most changes were those made necessary to maintain daylight contact flights on unlighted routes.

### 13 Pick-up Routes to be Asked by AAM

THIRTEEN air mail pick-up routes covering 6,881 miles and serving 276 towns are to be sought by Automatic Air Mail Inc., of Lost Nation, Ia., according to recent application filed with CAB.



#### Applications

Chesapeake Airline Charter Service, Logan Field, Baltimore, has filed application to conduct non-scheduled day contact passenger service between Baltimore and Atlantic City, Baltimore or Washington to Ocean City, Md., and Washington to Atlantic City.

Automatic Air Mail Inc. has filed application for a new pick-up route and intends to seek 12 more.

#### CAB Decisions

**Delta Rate:** CAB has issued a decision granting increased air mail pay to Delta Air Corp. Complete story on page 37.

#### Hearings and Oral Arguments

**Mexico City Case:** Oral argument was held before CAB on Jan. 30 on application of American Airlines for a route from El Paso and Ft. Worth to Mexico City. Pan American, Braniff and Eastern were present as interveners. Complete story on page 37.

#### Miscellaneous

**PAA Liberia Stop:** Pan American Airways Inc. has received permission to serve Monrovia, Liberia, through the marine airport at Fisherman Lake, Liberia.

**Special PAA Trip:** Pan American Airways has received permission to transport 11 passengers and up to 3,600 lbs. of baggage from New York to Natal, Brazil, for the Coordinator of Inter-American Affairs.

**Loening Okayed:** Interlocking relationships of Grover Loening as director of All American Aviation Inc. and chairman of the board of Roosevelt Field and Platt-Le Page Aircraft Corp. have been approved by CAB.

**Agreement Approved:** CAB approval has been given to an agreement between United Air Lines and Western Air Lines whereby the former furnishes WAL with radio coverage and all services required for making reservations, and handling of WAL passengers arriving at and departing from Lindbergh Field, San Diego.

## Safety Council Makes Awards

UNITED Air Lines, Braniff, Mid-Continent and 11 other airlines have received 1941 aviation safety awards from the National Safety Council.

Winner of group A (100,000,000 or more annual passenger-miles) was United, the only airline in that group to finish 1941 without a passenger or crew fatality. The company has flown 312,207,740 passenger-miles since its last fatal accident on Dec. 4, 1940.

Group B winner (10,000,000 to 100,000,000 annual passenger-miles) was Braniff, which has operated 109,603,136 passenger-miles since its last fatality on Mar. 26, 1939.

Mid-Continent won group C (less than 10,000,000 passenger-miles yearly). The company had no deaths in 1941 and has compiled 31,907,096 passenger-miles since its last fatal accident on Nov. 15, 1934—more than seven years of safe operation.

The 11 other airlines which also had no fatal accidents last year and were awarded certificates were: Canadian Colonial Airways Inc., Chicago & Southern, Catalina, Continental, Delta, Inland, Hawaiian, National, Northeast, Pennsylvania-Central and Western.

Members of the award committee were Harry F. Guggenheim, chairman; Dr. George W. Lewis, NACA; Dr. William F. Durand, Stanford University; Col. E. S. Gorrell, ATA; Col. John Stilwell, president of the Council, and Lew R. Palmer, vice president of the Council.

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# Airline Personnel



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Dennis

Dorrell

Jensen

## Sales and Traffic

Robert Burnett has been transferred from NY to WA by Pan American. He is handling passenger priorities.

Sidney E. Collins, manager of American's agency department in CG, has been appointed traffic manager at HT.

W. T. Evans is station manager for TWA at SN, having been transferred from LA.

John C. O'Connor, formerly traffic representative for United in NY, has been named manager of air mail, express and freight in PG.

Henry (Huck) Longfellow, manager of United's agency and foreign department, has been assigned to WA for the duration of the war.

Miss Shirley Carman, formerly with TWA in KC, is now secretary to Lowell Lee, Pan American's dsm in WA. Miss Ann Marie Shaughnessey, formerly a Pennsylvania-Central stewardess, is now Pan Am's WA receptionist.

United has transferred the following traffic personnel to WA: James Wood, from TL; Hal Wright, from CG; Bill Broughton, from CG; Tom Lindsey, from PG, and Fred Evanson, from DV.

Lynn H. Dennis, formerly acting supervisor of stations for Northeast, has been named supervisor of stations. Dennis has also served as NEA's reservations manager. Before joining the company, he had been employed by Pan Am, TWA and Penn-Central.

Robert W. Butler, formerly of United, is now American's sales representative for northern Ohio and western Pennsylvania.

American has awarded five-year pins to the following sales and traffic personnel: Joseph D. Wade, ticket agent at BW; Alexander S. Dunning, traffic representative at BJ; Francis W. MacBarron, BW traffic representative; Louis J. Amiro, NY reservations agent; Florian J. Stevens, assistant chief passenger agent at CG; Charles A. Stevens, NY traffic representative; Richard W. Baker, NY reservations manager; Gordon M. Fairchild, BW reservations agent, and Clifford T. Unbekant, NY traffic representative.

## Operations

T. A. Schmidt, former flight superintendent for American at BU, has been appointed supervisor of operations regulations for the company.

George E. Harris, Walter C. Hill Jr. and Frederick H. Anderson are now pilots for Eastern.

Samuel S. Ruckel has been promoted from mechanic to senior mechanic for TWA at KC. Sidney L. Phillips has been advanced from junior mechanic to mechanic at the same station.

Sam P. Martin has been named special assistant to J. A. Herlihy, United's executive vice president-operations. Martin, who has been in charge of the company's regulations department, fills the temporary vacancy left by A. F. Bonalle, who is on active duty with the Navy. W. H. Moulton succeeds Martin.

George T. Rutledge, assistant to the supervisor of stations; Ben William Groth, foreman in CG, and G. Martin Norman, senior mechanic in NY, have been awarded 15-year pins by American. The following joined the company 10 years ago: O. A. C. Tucker, chief mechanic at TZ; Walter C. Grasel, NY radio inspector; Carl F. Gnauck, EO mechanic; Adolph Stehno, CG lead mechanic.

Vernon A. Dorrell, Mid-Continent's vice president-operations, has gone on active duty with the Navy's aviation service. He is succeeded by Robert P. Harris, assistant operations manager.

C. J. Jensen has been appointed assistant to the president of Mid-Continent, with headquarters at the company's MP base, and will have charge of operations at that point.

Paul Carmichael, Continental's general sales and traffic manager, is now in charge of the company's traffic and sales matters, in the absence of Clarence C. West Jr., vice president-sales-traffic. West has been called to active duty by the Air Corps.

Clark Kee, American's airways engineer, has completed 10 years of service with the company. Also receiving a 10-year pin from American is D. H. Richards, assistant chief passenger agent at DL.



Kee

Carmichael

Schmidt

Martin

## Miscellaneous

Juan T. Trippe, president of Pan American, has been awarded the Daniel Guggenheim Medal for 1941 for his work in the "development and successful operation of oceanic air transport."

David C. Adkins has been named promotion and publicity manager for Northeast. He joined the company last September as promotion representative.

Robert M. Faulk, son of C. E. Faulk, president of Delta, has resigned as the company's SH ctm to enlist as a flying cadet in the Army Air Corps. He is assigned to Maxwell Field for preliminary training.



**Post-War Planning:** A. E. Floan, center seated, Northwest Airlines' director of economic research, traces proposed post-war routes for some of the company's district traffic managers. Seated, left to right, are E. M. Benz, Seattle; Floan; Hugh Johnston, Winnipeg. Standing are Jim Fauteux, Chicago, and Dan Hutchins, Portland.



**CPT to UAL:** These four graduates of the Civilian Pilot Training cross country and instructor courses have been accepted by United Air Lines and put into training for eventual work as first officers. Left to right, "Cody" Gates, W. W. Walter, Howard Jon Anderson, and Roland E. Parcel.



Trippe

Adkins

Faulk

Richards



## A Year's Growth of Civil Aviation

# Pilots Increase 59%, Planes 43% in 1941

### Gain of 12% in Landing Areas Reported by CAA

THAT AVIATION'S rapid progress last year was by no means limited to the military field is evidenced by Civil Aeronautics Administration figures showing a 59.7% increase in the number of certificated civilian pilots during 1941, a 43.1% boost in number of certificated planes, and a 12.1% rise in total civil airports and landing areas available.

In the year from Jan. 1, 1941, to Jan. 1, 1942, according to official records, the number of U. S. certificated pilots increased from 63,113 to 100,787, the number of certificated civilian planes from 17,351 to 24,836, and civil landing areas in operation from 2,112 to 2,369.

A nearly five-fold gain in number of pilots during the past three years sharply reflects the impetus which the Civilian Pilot Training Program has given to civil aviation.

At the beginning of CPTP in 1939, some 13 years after the Dept. of Commerce started certificating pilots, a total of 22,983 persons were licensed to fly. Since 1939, almost 78,000 new civil pilots were licensed, approximately 60,000 being turned out by CPTP, leaving about 18,000 who learned to fly independent of government aid.

The 100,787 certificated civil pilots in the U. S. on Jan. 1, 1942 were classified by CAA as follows: airline 1,587, commercial 15,142, limited commercial 287, and private 83,771.

### 3,206 Women Pilots

Of the 3,206 women pilots at that time, 184 held commercial ratings, 13 limited commercial, and 3,009 private licenses.

The influence of CPTP on civil aviation is also found in the rise in number of certificated planes since 1939. Up to the beginning of 1939 there were only 10,000 civil planes in the U. S., but in the next three years during which the pilot training program was in operation the total jumped nearly two and a half times to 24,836.

At the beginning of this year, landing facilities of all kinds, civil and military, totaled 2,846, representing an increase of 328 during 1941.

As of Jan. 1 1942, there were on record with the CAA 2,484 airports and landing fields compared with

	Certificated Aircraft			Certificated Pilots			Airports & Landing Fields			Total Seaplane Jan. 1, 1942
	Jan. 1 1941	Jan. 1 1942	Percent Increase	Jan. 1 1941	Jan. 1 1942	Percent Increase	Civil	Army	Navy	
Alabama	119	195	55.5%	661	977	47.8%	28	5	0	33
Arizona	103	156	51.5%	451	740	64.1%	53	1	0	54
Arkansas	149	211	41.6%	803	1,280	109.0%	30	0	0	30
California	1,753	2,404	37.1%	8,285	12,053	45.5%	183	7	4	194
Colorado	109	268	145.9%	940	1,405	50.5%	38	1	0	39
Connecticut	198	274	38.4%	992	930	-6.2%	18	0	0	18
Delaware	89	134	50.6%	205	281	37.1%	9	0	0	9
Dist. of Col.	214	311	45.3%	580	816	40.7%	1	1	1	3
Florida	389	564	45.0%	1,462	2,500	71.0%	97	5	10	112
Georgia	241	380	57.7%	1,072	1,550	44.6%	47	1	1	49
Idaho	92	123	33.7%	523	758	44.9%	44	0	0	44
Illinois	992	1,370	38.1%	3,033	5,039	66.1%	82	2	1	85
Indiana	819	687	-16.1%	1,418	2,060	45.3%	55	1	0	56
Iowa	381	549	44.1%	1,261	2,299	82.3%	49	0	0	49
Kansas	382	801	112.3%	1,326	2,399	80.9%	44	2	0	46
Kentucky	118	176	49.2%	375	649	73.1%	18	1	0	19
Louisiana	208	284	36.5%	1,000	1,479	47.9%	28	4	2	34
Maine	134	203	51.5%	330	531	60.9%	15	0	0	15
Maryland	230	373	62.2%	758	1,195	57.4%	20	3	0	23
Massachusetts	406	594	46.3%	1,728	2,527	46.3%	38	2	1	41
Michigan	723	1,017	40.7%	2,208	3,820	73.0%	120	4	0	124
Minnesota	401	600	49.6%	1,053	2,281	113.8%	29	1	0	30
Mississippi	116	155	33.6%	468	774	65.4%	34	0	0	34
Missouri	505	649	28.5%	2,075	3,215	54.9%	46	0	1	47
Montana	130	170	30.8%	844	1,365	61.1%	71	0	0	71
Nebraska	166	224	34.9%	879	1,365	55.3%	47	2	0	49
Nevada	50	71	42.0%	174	235	35.1%	24	0	0	24
New Hampshire	98	90	-8.2%	132	120	-9.1%	13	0	0	13
New Jersey	496	698	40.7%	1,830	2,549	39.3%	32	1	3	36
New Mexico	76	164	115.8%	364	611	67.9%	48	0	0	48
New York	1,323	1,765	33.4%	4,883	7,395	51.2%	100	4	1	105
North Carolina	382	496	29.8%	1,412	2,121	50.9%	46	1	0	47
North Dakota	102	129	26.5%	385	637	65.5%	31	0	0	31
Ohio	899	1,286	43.0%	2,654	4,251	60.2%	115	3	0	118
Oklahoma	362	526	45.3%	1,448	2,612	80.4%	59	1	0	60
Oregon	210	334	59.0%	921	1,601	73.8%	34	2	0	36
Pennsylvania	1,438	2,357	63.9%	3,452	5,354	55.1%	109	1	1	111
Rhode Island	135	169	25.2%	209	377	80.4%	4	0	0	4
South Carolina	160	234	46.3%	627	1,057	68.6%	30	1	1	32
South Dakota	87	119	36.8%	442	644	45.7%	21	0	0	21
Tennessee	226	313	38.5%	1,066	1,646	54.6%	22	0	0	22
Texas	980	1,418	44.7%	3,918	6,842	74.6%	192	14	1	207
Utah	81	122	50.6%	845	930	10.6%	27	0	0	27
Vermont	59	75	27.1%	207	300	44.9%	11	1	0	12
Virginia	269	402	49.4%	1,018	1,459	43.3%	54	1	4	59
Washington	296	448	51.4%	1,709	2,515	47.2%	41	4	4	49
West Virginia	146	205	40.4%	721	1,129	56.6%	23	1	0	24
Wisconsin	347	490	41.2%	929	1,490	61.9%	46	1	0	47
Wyoming	64	102	59.4%	238	396	66.4%	33	0	0	33
Alaska	149	187	25.5%	184	232	26.1%	...	...	...	...
Canal Zone	...	...	...	37	46	24.3%	...	...	...	...
Hawaii	31	51	64.5%	...	274	7.9%	...	...	...	...
Puerto Rico	21	31	47.6%	45	57	26.7%	...	...	...	...
Foreign, Misc.	7	8	14.3%	188	374	98.9%	...	...	...	...
TOTALS	17,351	24,836	43.1%	63,113	100,787	59.7%	2,369	77	38	2,484

2,202 the year before, a gain of 282. Also there were 362 seaplane bases and anchorages, against 316 at the beginning of last year, a gain of 46.

The total number of landing areas in operation at the beginning of this year included 77 Army airports, 38 Navy airports, and 36 military seaplane bases and anchorages.

### 37 Pilots Per Field

Considering civil facilities alone, on Jan. 1, 1942, there were an average of 37.4 pilots and 9.2 planes for each airport or seaplane base in the country.

Of the total landing fields listed, 1,086 were municipal, 930 commercial, 283 intermediate, 40 miscellaneous government, and 30 private. Lighting facilities were provided at 662 airports and at 21 seaplane bases.

As shown in the accompanying table, California—where all non-airline civil flying has been grounded by military decree—led all states in number of pilots and planes, and ranked second only to Texas in number of airports.

Comparing the figures for Jan. 1 of this year with those of a year earlier, seven states, instead of three now have more than 1,000 civil aircraft, while 30 states, instead of 21, now have more than 1,000 civil pilots. Also, seven states now have more than 100 airports and landing fields in operation.

### True Prediction, Thus Far

At the beginning of CPTP in 1939, Grove Webster, then chief of the CAA private flying development division, predicted that there would be 100,000 certified pilots and 50,000 private planes in the U. S. within five years.

By the end of last year the 100,000 pilot total had been passed, and the plane figure was approaching 25,000, with still two and a half years to go.

### NYU Enlarges Courses

To meet the growing demand for aviation and radio communication instructors, New York University's School of Education will enlarge its facilities to permit double last semester's enrollment in these fields, according to Dean E. George Payne.

During the semester just closed 70 students enrolled to prepare for entrance into the Army or Navy as flight cadets or flight instructors and 160 others were preparing for commissions in the Naval Reserve, petty officers' ratings in radio, and as instructors in civilian and service ground schools as well as for pilot certificates.

### Insurance Rates Again Are Reduced for CPTP Students

ANOTHER voluntary reduction in insurance rates for participants in CPTP—the seventh since inception of the program in 1939—was placed in effect at the beginning of the spring session early this month.

Rate for the \$3,000 life and \$1,000 hospitalization and accident insurance for trainees in the elementary course has been lowered from \$1 to \$4.90, and the rate for secondary students from \$9 to \$6.30.

For the CAA type A training, which covers secondary, cross country and instructor courses, the rate has been reduced from \$25 to \$17.50, and for Type B training, including cross country and instructor courses only, the rate has been cut from \$16 to \$11.20.

Each flight operator is required to carry \$50,000 to \$100,000 public liability and \$5,000 property damage insurance on each CAA student enrolled in his school, and these rates have also been reduced.

Prior to the CAA type of controlled training, a \$3,000 policy cost the student pilot \$35. CPTP started with a \$20 rate, more than four times the present cost. A safety record of more than 6,000,000 miles per fatality is responsible for the successive reductions on part of the commercial companies.

Section  
Rates, &  
Exchange

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## CAP Must Prove Worth

(Continued from page 3)

us. We are prepared to establish and maintain guards and ground crews at outlying airports which might be of strategic value."

With this spirit prevailing, CAP takes heart from the rapidity with which the Air Corps Ferrying Command has accommodated itself to use of civilian fliers in order to release combat personnel, and is perfecting its plans against "any eventuality," from fire-spotting to cargo and personnel ferrying.

### Equipment Problem

A leading and troubling question raised but yet unanswered by the CAP program involves the acquisition of new lightplanes, parts and equipment for CAP use. Supporters of the program have long urged that one of the benefits which CAP would win for civil aviation would be satisfactory priorities for the purchase of new equipment despite the pressure of strictly military needs.

Now, however, the problem seems to be not a better priority rating than the present A-10, but a demand for new planes which light-plane manufacturers could meet under the existing rating. While CAP officials from time to time have predicted that the program would serve to stimulate lightplane sales, manufacturers are reported still awaiting orders and CAP has yet to show signs of offering a substitute stimulus for the normal buying urge of private pilots in peacetime.

Studies on equipment needs are still underway though, and additional time and experience are be-

lieved necessary before this problem is solved.

Until CAP is in the air on the Pacific Coast, virtually the only civilian flying will be some 60 or 70 airplanes used in the spring of the year for seeding, and in summer and fall for crop dusting against pests, according to Joseph Marriott, manager of the Sixth CAA Region headquarters at Santa Monica.

Fixed base operators at Brawley, Sacramento, Modesto and other California points will go ahead with this program under duplicate check because the pilots not only have to be recertified but also have to secure new waivers of minimum altitude laws, all of which were recalled along with the pilot certificates in December.

Since the War Dept. several weeks ago announced intention to buy more civilian aircraft suitable for its uses, Marriott said CAA inspectors have carried out inspection and valuations on virtually all multi-engine craft and also on the heavier-powered single engine private ships such as Beechcraft, Waco, Howard and Stinson.

"We have no way of knowing just how many of these ships are purchased after we transmit the descriptions," Marriott explained. "Negotiations and price arbitration are carried on between the owner and Defense Supplies Corp. Consequently I cannot say whether or not preference has been given to aircraft in the California-Oregon-Washington grounded area."

## CAB Extends Pilot Certificates 90 Days

THE CIVIL Aeronautics Board has issued a special regulation automatically extending for 90 days all pilot certificates, except lighter-than-air and airline, due to expire between Jan. 28 and Apr. 28, 1942.

The greatly increased number of certificates currently in effect and the extra work placed upon inspectors in carrying out emergency regulations, it was explained, would make it impossible for inspectors to endorse certificates during this period.

CAB is known to have under consideration important revisions of pilot certificate requirements, which probably will be placed in effect before the 90-day extension period expires.

California CPTP students for the spring training program will very nearly fulfill their quota of around 1,100 elementary and 500 secondary applicants, Marriott stated, with training to be given at new bases east of the grounded coast zone as outlined in AMERICAN AVIATION, Jan. 15.

There have been many instances of students transferring to schools that are sponsoring the inland training, and, of course, some complaints over travel and subsistence expenses so far from sponsoring colleges, but no diminution of enrollment in spite of the clause obligating graduates to military service. Six or eight operators representing California schools will go ahead with advanced training courses also.

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# Liberty Aircraft Files 1st 1942 SEC Registration

By F. H. STEVENSON

**THE FIRST** aviation company to announce plans to venture into the public market in search of funds thus far this year, Liberty Aircraft Products Corp. proposes to raise somewhat less than \$1,500,000 of new money, almost two-thirds of which will be used to pay off a note.

This proposed offering compares with the preceding one by United Aircraft in which it raised more than \$26,000,000 for working capital, research, etc., so as to be in a position to meet post-war developments. It also compares with the Vultee offering, shortly before United's, of around \$6,000,000 which was used in part payment for stock representing control of Consolidated Aircraft Corp.

Liberty's registration statement, filed with the Securities & Exchange Commission late last month, covers 60,000 shares of cumulative convertible preferred stock and 120,000 shares of \$1-par common reserved for conversion of the preferred. E. H. Rollins & Sons Inc. was named principal underwriter. Offering price of the stock and underwriting group will be supplied by amendment to the statement.

The company lists maximum proposed offering price, for the purpose of calculation of the registration fee, at \$25 a share, indicating that Liberty does not propose to raise more than \$1,500,000 through the offering.

Of this sum, \$900,000 will be applied toward payment of a \$1,000,000 note held by Manufacturers Trust Co. This note was given in part payment of \$1,500,000 for 100,000 shares of Autocar Co. common. There are 197,655 shares of Autocar outstanding, giving Liberty 50.6% of voting control and 100% voting control of Autocar Sales & Service Co. The balance of the proceeds, which will probably be under \$600,000, will be added to working capital.

Liberty, employing around 1,200 workers and having a backlog of unfilled orders of about \$6,900,000 as of Nov. 30, is engaged in the manufacture and processing of parts and equipment for aircraft to customers' specification, upon order. About 90% of the work is done according to government standards and specifications.

The firm supplies parts to others having government contracts and "such business will probably continue to constitute the major portion of the business of the registrant."

The company listed its officers and directors and their stockholdings as of Jan. 1, 1942, as follows: Robert Simon, president, treasurer, 13,141 shares; J. Louise Simon, security holder, 10,989; Oliver H. Payne, chairman, 20,609; George Hauser, vice-president, 1,100; William G. Holman, secretary, none; Raymond V. V. Miller, director, five; Charles R. Stevenson, director, 1,000 (owned of record by Stevenson, Jordan & Harrison Inc.); Grumman Aircraft Engineering Corp., security holder, 56,468; and E. H. Rollins & Sons Inc., underwriter, 96 (owned beneficially, but not of record).

Salaries in the calendar year 1941 were as follows: Simon, \$38,450; Payne, \$19,649; Hauser, \$12,790; Holman, \$10,150; Miller, \$1,950; and Stevenson, \$100.

The company had a net profit in the 11 months to Nov. 30 of \$385,535 after income and excess profits taxes, compared with \$239,705 in full year 1940. The net sales in the 11 months were

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### Latest Dividends

**United Aircraft Corp.**—75c on new preferred issued last month, payable Mar. 2 to stockholders of record Feb. 16.

**United Aircraft Products Inc.**—25c payable Mar. 16, record Feb. 26; paid like amount on common on Dec. 15, last.

**Warner Aircraft Corp.**—Initial payment of 10c, payable Mar. 2, record Feb. 16.

**Air Investors Inc.**—65c on participating preferred, paid Dec. 29, record Dec. 24; paid \$1 on Dec. 27, 1940.

\$3,816,694; cost of sales, \$2,616,199; profit before taxes, \$1,093,515; provisions for taxes, income, \$165,629, excess profits, \$542,350.

Net sales in the calendar years were as follows: 1937, \$372,123; 1938, \$483,817; 1939, \$851,786; 1940, \$1,892,545; and 1941, \$4,536,097.

Balance sheet as of Nov. 30: Current assets, \$1,547,010, including cash, \$248,029, notes receivable—trade, \$33,863, accounts receivable, \$325,730, and inventories, \$939,387; investment in Autocar, \$1,510,548; deferred charges, \$57,453; fixed assets, \$512,013; total assets, \$3,627,025. Liabilities; current liabilities, \$2,353,241, including accounts payable—trade, \$169,324, notes payable, \$1,200,900, advance payments, \$17,064, accrued liabilities, \$965,953; common stock \$200,000; capital surplus, \$493,919; earned surplus, \$579,864.

### Trading Summary

Stocks staged a moderate recovery from the last report with airline shares taking the initiative. Trading, however, was at a considerably slower pace. 155,550 shares changing hands in the 10 days against 303,590 in the preceding period studied, which covered 15 days.

The market took the Harter Committee (a special committee on aviation for the House Military Affairs Committee) report in its stride, most issues remaining unchanged or showing small gains. However, trading during most of the period was at such a slow pace as to make results inconclusive.

Among the airlines, American gained 1½; Eastern was up 2½; and TWA gained a point. Most activity was in Curtiss-Wright which was unchanged on 18,500 shares. Square D showed the largest advance, gaining 2½. Active issues included: Aviation Corp., unchanged on 17,300 shares; Bendix and Continental Motors, 12,700 each, with prices off ½ and unchanged, respectively. Of the 25 issues covered, 11 showed gains, six were off and four unchanged.

On the Curb, trading dropped to only 40,900 shares in the 10-day period, from 115,000 in the preceding 15 days. Air Associates showed a gain of 2 points on a negligible turnover. Most active issue was Republic Aviation which lost ½ on 8,600 shares. Beech Aircraft was off ¼ on 6,400 shares.

It is interesting to note that weakness in aviation shares in the latter part of last year occurred in the face of a tremendous increase in dividend payments. Of the 17 strictly aviation shares listed on the Big Board, 12 were on a dividend basis and made payments totaling \$47,472,000, a gain of 66.1% over 1940 and representing an average yield of 7.6% of the same as the average yield of all dividend-paying listed common shares.

The average price of shares on the Curb fell 13½% last year. The number of issues traded on this market, both listed and unlisted, fell from 1,059 in 1941 and their total market value was off to \$7,354,311.836 from \$8,612,037,000, decline of 14.6%.

### Incorporations

**California**—Aircraft Specialties Co., manufacturer of aircraft tubing, granted a permit to issue 69,791 shares of its authorized capital stock of 150,000 shares, 40c par. Directors: J. Loren Hastings, Clyde Stitton, B. A. Berthelsen, George Parr, Harding Baskwell, Clinton LaTourrette.

**Illinois**—Chicago School of Aircraft Instruments, Inc., 2154 W. Lawrence Ave., Chicago; 500 shares common, \$100 p. v. Incorporators: J. W. Milne, L. J. Bartoline, B. V. Schmidt. Correspondent: J. W. Milne, 29 S. La Salle St., Chicago.

**New York**—Ardun Mechanical Corp., New York; aircraft; 200 shares, n. p. v.; Adler & Schwartz, 19 W. 44th St., New York.

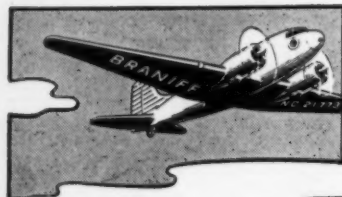
**New York**—Kearney Aeronautical Corp., New York; aircraft; 200 shares, n. p. v.; McDermott & Turner, 100 Broadway, New York.

**New York**—Perry Aircraft Products Corp., New York; aircraft; 100 shares, n. p. v.; William Weisman, 1270 6th Ave., New York.

**New York**—Standard Aircraft Parts Co. Inc., New York; 200 shares, n. p. v.; W. Solifrey, 292 Madison Ave., New York.

### Curtiss-Wright Corp.

Reports that the dissolution of the subsidiary, Devon Corp. (Delaware) became effective Dec. 12, 1941, at which time 96.12% of its issued and outstanding stock was owned by Curtiss-Wright and still is.



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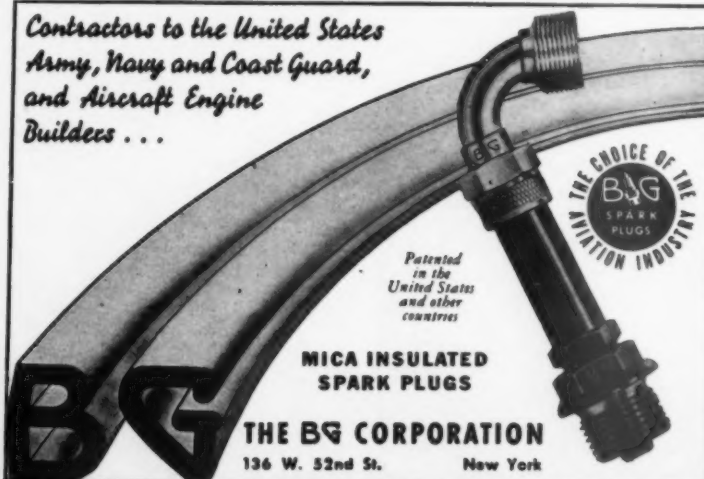
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## Current SEC Reports

Girdler-Woodhead Control  
At Consolidated is Outlined

THE HITHERTO unannounced division of authority under which Tom Girdler, chief executive officer, and Harry Woodhead, president, will operate Consolidated Aircraft Corp., control of which has been acquired by Vultee Aircraft Inc., is clearly outlined in a current report filed with the Securities & Exchange Commission without comment late last month.

The reports lists changes in the by-laws of Consolidated which have the following effects:

1. Creating office of chairman of the board of directors and defining the duties of this office;
2. Designating the chairman as the chief executive officer (Girdler) in lieu of the president (Woodhead);
3. Permitting one person to hold any two offices except said chairman and president;
4. Providing for the removal of officers by the vote of the majority of the directors, in lieu of by the president;
5. Eliminating from the duties of the president those assigned to the chairman;
6. More definitely prescribing the duties of the vice president;
7. Restating without material change the duties of the secretary and treasurer; and
8. Authorizing the directors or the president to delegate powers of officers temporarily absent in lieu of vesting such powers in the president only.

The amendment also notes that Aviation Corp., parent of Vultee, owned as of Nov. 30 some 752,168 shares of Vultee or about 71.49% of voting power.

## Vega Airplane Co.

Reports that as of Dec. 31, 1941, none of its previously outstanding 460,000 shares of \$1-par common remained outstanding as a result of its merger with Lockheed Aircraft Corp. Vega ceased to exist as a corporation on Dec. 31, 1941.

## Waco Aircraft Co.

Salaries of officers and directors during the fiscal year were as follows:

Lee N. Brutus, vice-president, \$8,470; Hugh R. Perry, vp.-sales, \$6,729; and A. F. Arcier, chief engineer, \$7,579.

The company had a net profit in the year of \$193,841 after federal income taxes. Gross sales, \$2,812,640; cost of sales, \$2,188,039; operating expense, \$276,908; provision for federal income tax, \$163,630.

Balance sheet as of Sept. 30: Current assets, \$924,833, including cash, \$187,137, accounts receivable, \$67,923 and inventories, \$669,639; fixed assets, \$331,262; total assets, \$1,265,290. Liabilities: current liabilities, \$385,276, including accounts payable, \$73,169 and accrued payroll and premium, \$56,187; common stock, \$520,000; capital surplus, \$60,192; earned surplus, \$272,920.

## United Aircraft Corp.

Reports that during December it borrowed, pursuant to EPF contracts, on 2½% promissory notes from the National City Bank of New York the following amounts:

1. Notes due July 1, 1947, \$896,240, bringing the total under this loan agreement to \$13,206,934;
2. Due July 1, 1947, \$61,377, bringing total to \$1,512,843;
3. Due July 1, 1947, \$36,289, bringing total to \$1,970,747;
4. Due July 1, 1948, \$698,125, bringing total to \$1,881,073; and
5. Due July 1, 1947, \$105,890, bringing total to \$296,922.

Uncompleted government contracts held by United Aircraft include a number calling for the manufacture and delivery of airplane engines and spare parts. These run back as far as one dated Oct. 19, 1939, amounting to \$13,960,000—also two dated Nov. 4, 1940, totaling \$33,320,000 and \$29,910,000; one dated Nov. 5, 1940, for \$44,810,000 and another dated Nov. 6, 1940, totaling \$64,540,000.

Others in 1941 were placed Jan. 2 for \$7,960,000; three on June 30, totaling \$28,150,000, \$38,590,000 and \$22,400,000 with a supplementary contract in negotiation which would increase the last by \$12,300,000; and one dated July 1, 1941 for \$6,860,000.

## National Airlines

Company in its annual report for the year ended June 30, 1941, lists officers, directors and holdings of \$1-par common stock as follows:

G. T. Baker, president, 106,894 shares; D. G. Bash, treasurer, 1,015 (1,000 owned jointly with Baker); J. D. S. Coleman, director, none; H. C. Duncan, director, none; R. P. Foreman, assistant secretary and treasurer, 25; E. J. Kershaw, vice-president, 1,000 (500 owned jointly with Baker); H. S. Parker Jr., vice-president, 29,250 (held jointly with H. S. Parker Sr.); H. R. Playford, director, 2,205; Paul Poynter, director, 100; E. P. Tallafiero, director, 100; and J. A. Waterman, director, 254.

Lehman Bros. held 46,876 shares and the balance outstanding was \$2,281, making a total outstanding of 270,000.

An option warrant was issued Apr. 1, 1941, to Baker, expiring Apr. 15, 1944, for the purchase of 10,000 shares of common at \$7.50 per share "in consideration of the added responsibility of the president due to the increased size of the company's operations."

An option was issued Apr. 1, 1941, to Lehman Bros., expiring Apr. 15, 1944, for the purchase of 10,000 shares at \$7.50 per share "in consideration of certain services and acts performed by them in connection with the public offering of 40,000 shares of" common at \$7.50 per share.

Salaries: Baker, \$11,150; Kershaw, \$7,900; and Joseph Bailey, \$7,404. (While the dates are not given, the salaries are presumably for the fiscal year ended June 30, last—Ed. Note.)

## Aircraft Accessories

Company has received approval of New York Curb Exchange of an application to list 60,000 additional shares of common on official notice of issuance.

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## Latest Aviation Earnings Reports

Beech Aircraft Corp. reports net profit for quarter ended Dec. 31, 1941, of \$193,502 after depreciation, interest, federal and state income taxes, equal to 48¢ a share on 400,000 shares of \$1-par capital stock. This compares with a profit of \$89,493 or 22¢ in December quarter of preceding year. Net sales for quarter just ended totaled \$5,128,239; provision for federal and state income taxes was \$473,747 against \$65,778 in 1940 December quarter. Current assets as of Dec. 31 were \$13,725,646 and current liabilities, \$13,342,938 comparing with \$3,103,049 and \$2,911,352, respectively, on Dec. 31, 1940.

Square D. Co. reports earnings of \$2,255,876 for first nine months of 1941, or \$5.17 a common share, compared with \$1,283,002, or \$2.82, in 1940 period.

Piper Aircraft Corp. in year to Sept. 30 had net income of \$210,883 equal after preferred dividends to \$1.44 each on 138,131 common shares, against \$157,823, or \$1.07 each on 136,456 shares, in preceding year; net sales were \$4,879,507 against \$3,230,086.

Solar Aircraft Co. in period from Apr. 26 to Nov. 1, 1941, shows a net income of \$105,510, after provision of \$85,887 had been made for federal income and excess profits taxes. Value of manufactured parts is placed at \$2,375,849, cost of goods sold at \$1,854,940, and other expenses total \$325,695.

Balance sheet Nov. 1: Total assets \$3,284,110, current assets \$2,196,289 which include cash \$23,915, accounts receivable \$451,697 and inventories of raw materials and work in process \$1,717,421. Deferred charges, \$68,067; net fixed assets \$562,170; total investments \$102,454; and other assets \$355,129.

Current liabilities \$1,983,131, consisting of \$635,557 in accounts payable, \$1,045,216 in notes payable, customers deposits of \$185,393, accrued payroll \$68,096, accrued federal and state taxes \$37,109 and other accrued liabilities \$11,756. Long term liabilities, \$37,250; total reserves, \$89,387; and total capital stock, \$846,672. Earned surplus, \$151,363 and paid-in surplus, \$175,472.

Vultee Aircraft Inc. reports net profit of \$3,100,735 for the fiscal year ended Nov. 30, 1941, after all charges and federal income and excess profits taxes, equal to \$2.95 a share on 1,052,168 common shares outstanding. This compares with the previous year's report showing a net profit of \$374,457 after charges and taxes, or 36¢ a share on 1,052,168 common then outstanding. Vultee's preliminary report early in January, before audit and year-end adjustments, estimated the net profit for 1941 fiscal at \$2,900,000 after taxes, which would be equal to \$2.75 a common share.

Net sales amounted to \$34,057,201 as compared with \$5,606,410 for the preceding year, an increase of over 500%. Provision for federal income taxes for

1941 fiscal totaled \$2,970,000 against \$115,000 for 1940.

Balance sheet as of Nov. 30: Current assets \$45,599,490 of which \$5,862,683 was cash. Net working capital amounted to \$7,343,045 after deducting current liabilities of \$38,256,445. Inventories included in current assets amounted to \$32,282,724 as compared with \$11,893,870 at the end of the 1940 fiscal.

Timm Aircraft Corp.—Predicting a growing demand for its plastic bonded plywood aircraft sub-assemblies from metal airplane manufacturers during the current year, Timm Aircraft Corp. reports net earnings for 10 months to Oct. 31, its new fiscal year, amounting to \$156,662 after all charges and provisions for federal income and excess profits taxes. This compares with a net loss of \$37,146 for the previous 12 months fiscal year.

After elimination of an accumulated deficit of \$113,699, as shown on the balance sheet of Dec. 31, 1940, an earned surplus of \$42,963 was created as of Oct. 31, 1941.

Sales for the 10 months of operations totaled \$915,544 as compared with \$121,654 for the full year 1940. Although the bulk of the sales were derived from manufacture of metal parts for other aircraft builders, the company has started production of the Timm Aeromold Trainer, model PT-200-C, fabricated from plastic bonded plywood and powered by a Continental 220-hp. engine, according to O. W. Timm, president.

Expansion of plant facilities in 1941

were marked by purchase of 54 acres of land adjacent to Los Angeles Metropolitan Airport, annual report of company stated. A service hangar of 10,000 sq. ft. of floor space has been completed on the new site and erection of a modern factory building of 56,000 sq. ft., costing approximately \$150,000 was begun, scheduled to be ready Apr. 1.

A 1,600-foot runway for flight tests is included in the new layout with ample room remaining for further expansion. The completed factory will house Timm's Aeromold division for production of Timm trainers and Aeromold sub-assemblies, leaving the present plant during its lease for manufacture of metal parts exclusively.

Current assets totaled \$250,413 against current liabilities of \$162,822.

Aircraft Accessories Corp.—Company and its subsidiary, Aircraft Accessories Corp. of Missouri, report for 10 months to Oct. 31, a net profit of \$85,089 after taxes and interest. Current assets totaled \$1,180,558; current liabilities, \$921,077. Capital stock amounted to 58,643 shares of \$5-par 54c preferred and 437,718 shares of 50c-par common.

Company anticipates net billings for fiscal year ending Apr. 30, 1942, of \$4,200,000 of which \$2,700,000 will be for the company and \$1,500,000 for the subsidiary. As of Dec. 9, backlog amounted to \$4,100,000 of which \$600,000 were for the company and \$1,500,000 for the subsidiary. Firm has approximately 350 employees.

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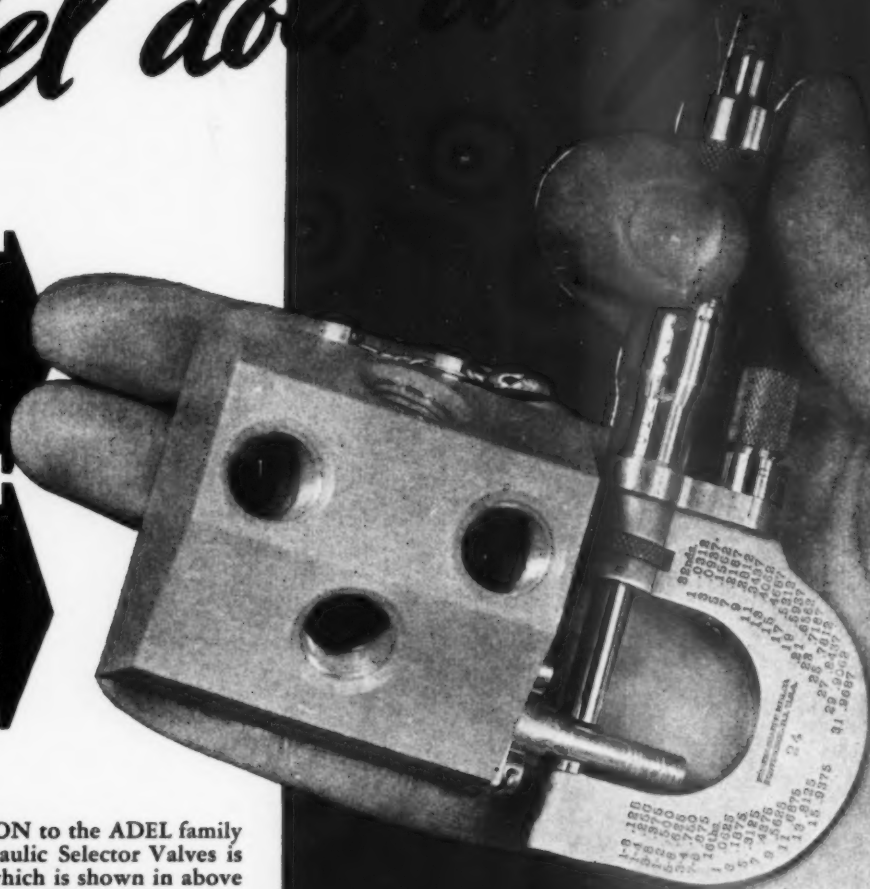
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